

NOKIA



V12152

**VCR 3704 VPS
VCR 3704
VCR 3704 EE**

Schaltbilder, Leiterplatten, Ersatzteile-Liste, Elektrischer Abgleich.

Mechanik-Justagen siehe nächste Seite.

Sicherheitsbauteil!



Dieses Symbol kennzeichnet in den Schaltbildern alle Bauteile, die nur durch Originalteile ersetzt werden dürfen.

Bei Reparaturen gültige Sicherheitsvorschriften beachten!

**Circuit diagrams, P. C. B., spare parts list, electrical alignment.
Mechanical adjustments see next page.**

Safety Component!



This symbol identifies in the circuit diagrams all safety critical parts. Replace only with specified part numbers.

Service and repair work to be performed only in accordance with existing safety regulations!

Schémas, circuits imprimés, liste des pièces détachées, alignement.

Mécanique ajustages voir page suivante.

Composant de protection!



Ce symbol indique tous les composants dans les schémas, qui doivent être remplacés uniquement par des pièces d'origines.

Pendant le dépannage, respecter les réglementations de sécurité!

Liste der Service-Manuale List of Service Manuals Liste des manuels	Elektrischer Abgleich, Schaltbilder, Leiterplatten, Ersatzteile-Liste	Mechanik-Justagen
Modell Model Modèle	Electrical alignment, circuit diagram, P.C.B., spare parts list Alignment, schémas circ. imprimés, liste des pièces détachées No.	Mechanical adjustments Méchanique ajustages No.
NOKIA VCR 3704 VPS NOKIA VCR 3704 NOKIA VCR 3704 EE	6611 74 35	6611 74 46 NOTE! Manual 6611 74 46 is only a supplement for the '93 models. The Basic Manual is 6611 77 06. (1990).
LUXOR VCR 4704 SALORA VCR 624	6611 74 36	
NOKIA VCR 3744 VPS/SV NOKIA VCR 3744 SV NOKIA VCR 3744 UK/VP	6611 74 37	
LUXOR VCR 4744 SV SALORA VCR 824 SV	6611 74 38	
NOKIA VCR 3764 HIFI VPS NOKIA VCR 3764 HIFI N	6611 74 39	
LUXOR VCR 4764 HIFI N SALORA VCR 914 HIFI N	6611 74 40	
NOKIA VCR 3784 HIFI VPS/SV NOKIA VCR 3784 HIFI N/SV NOKIA VCR 3784 HIFI UK/VP	6611 74 41	
LUXOR VCR 4784 HIFI N/SV SALORA VCR 924 HIFI N/SV	6611 74 42	
NOKIA VCR 3724 UK/VP NOKIA VCR 3724 IR/VP	6611 74 43	
NOKIA VCR 3714 VPS/SV NOKIA VCR 3714 SV	6611 74 44	
NOKIA VCR 3784 HIFI IR/VP	6611 74 45	

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CIRCUIT DIAGRAMS (Refer to the separate volume)

1. DISASSEMBLY

1-1. REMOVAL OF CABINET, MECHANISM UNIT AND MAIN BOARD

REMOVING THE CABINET PARTS (Fig. 1.1.1)

1. Remove the cabinet and bottom cover by removing the four screws (A) and five screws (B).
2. Remove the front panel by removing the locks of the clamps (C) using a screwdriver, etc. and slightly rotating the bottom part in the direction of the arrow.

Note: Electrical adjustments for the this model can be performed with only the cabinet removed.

REMOVING THE MECHANISM MAIN UNIT (Fig. 1.1.2)

After removing the cabinet parts:

1. Remove the two screws (D), and then remove the bracket.
2. Remove the 29-wire flat cable from the MC-2 PWB, and then remove the 8-wire flat cable from the VP-1 PWB Ass'y.
3. Remove the mechanism main unit by removing the two screws (E) and two screws (F).
Remove, as well, the two screws (G) at the cassette tray side while pressing the tray lock lever as shown in the enlarged view and pushing the cassette tray to the position where the two screw (G) appear.

REMOVING THE CP-1 PWB ASSEMBLY (Fig. 1.1.3)

After removing the cabinet parts and the mechanism unit:

1. Pull out the TM-1 PWB Ass'y from CN301 and CN302 while pressing and spreading out the four clamps (H) as shown by the arrows.
2. Remove the two red screws (J). Next, remove the CP-1 PWB Ass'y by lifting it straight up while pressing and spreading out the two clamps (K) as shown by the arrows.

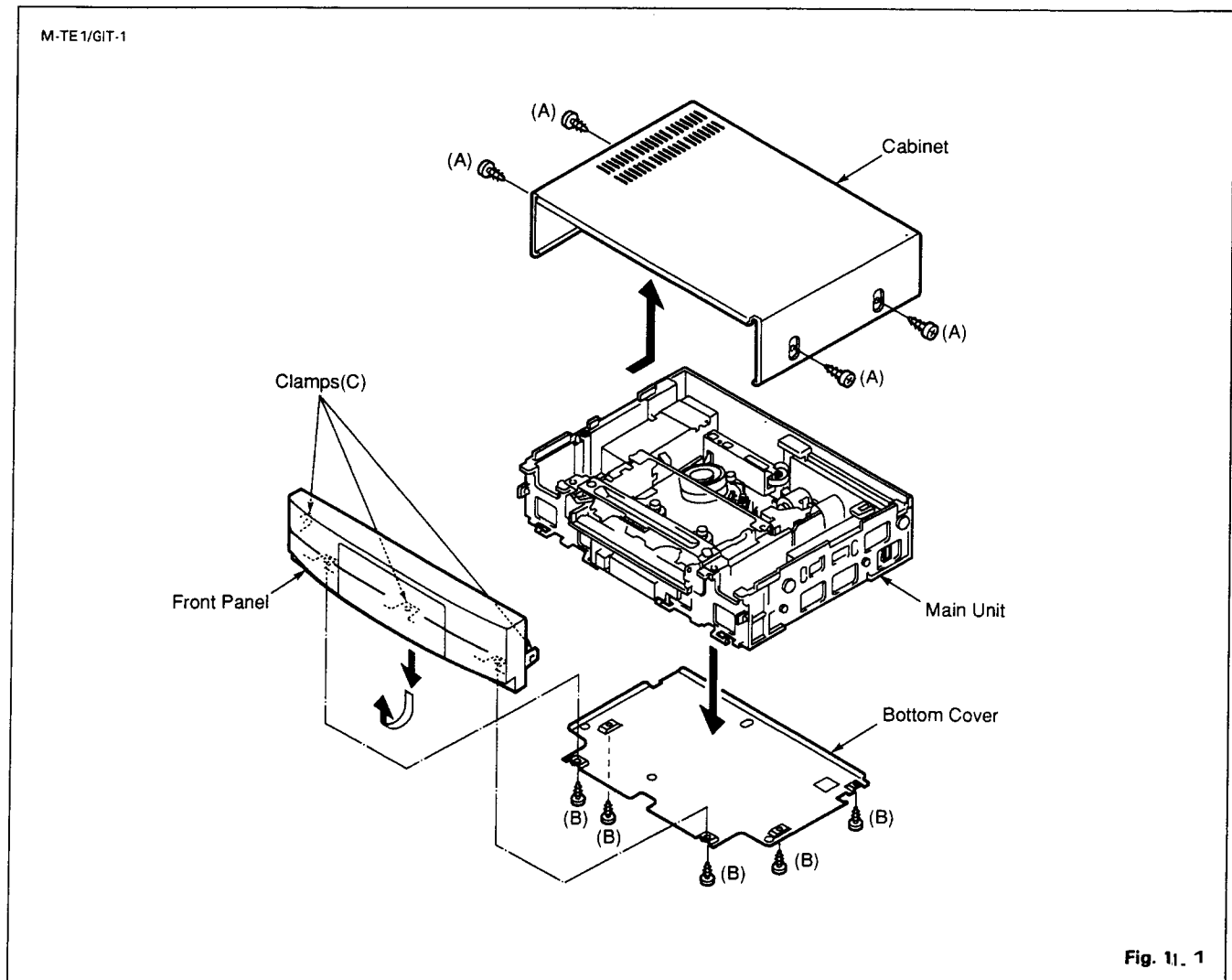


Fig. 1.1. 1

M-TE1/GIT-2

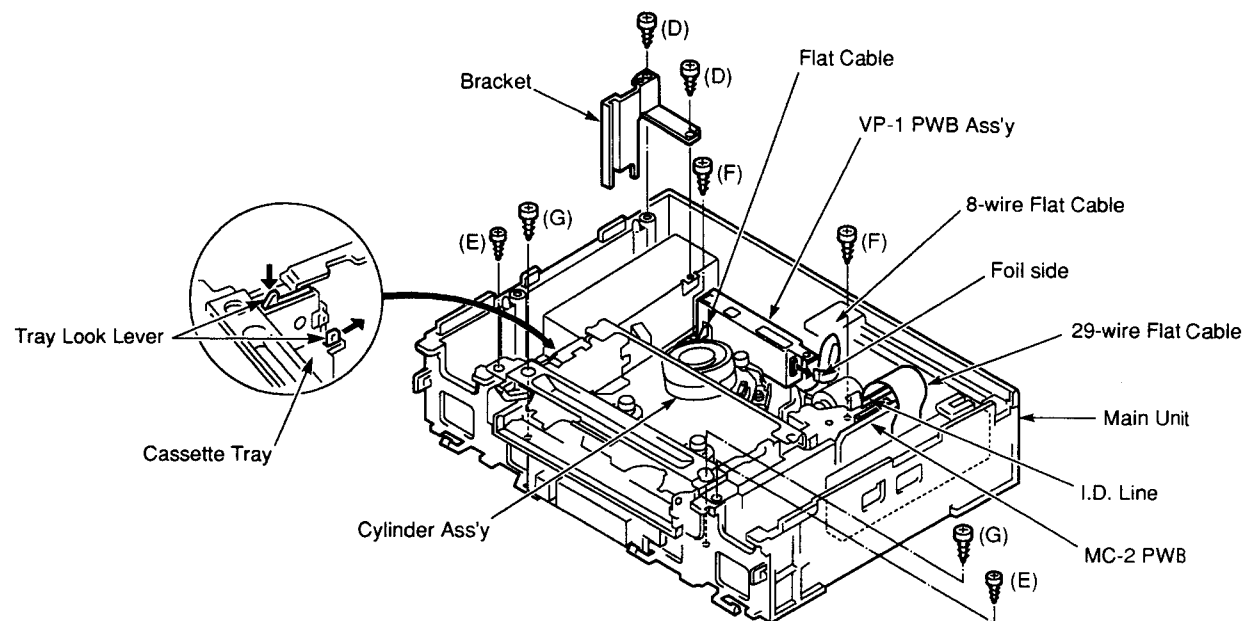


Fig. 1.1.2

M-TE1/GIT-3

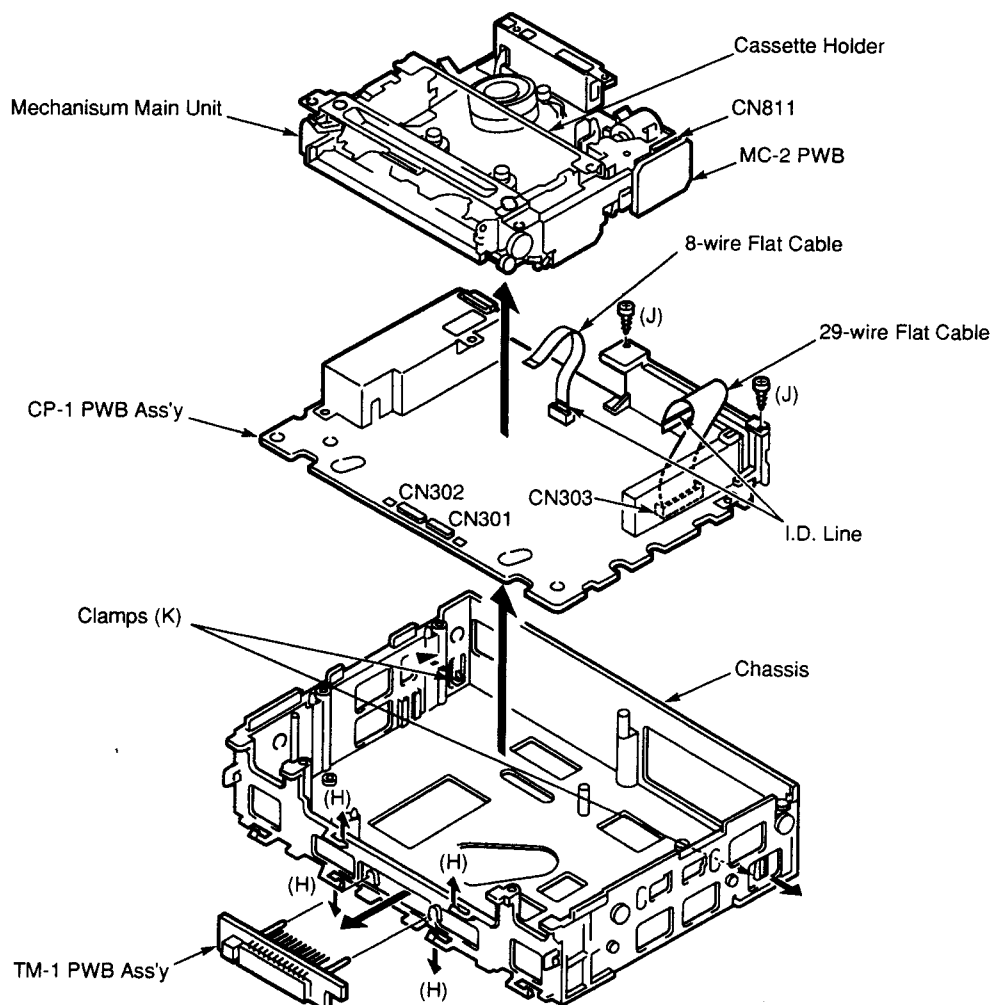
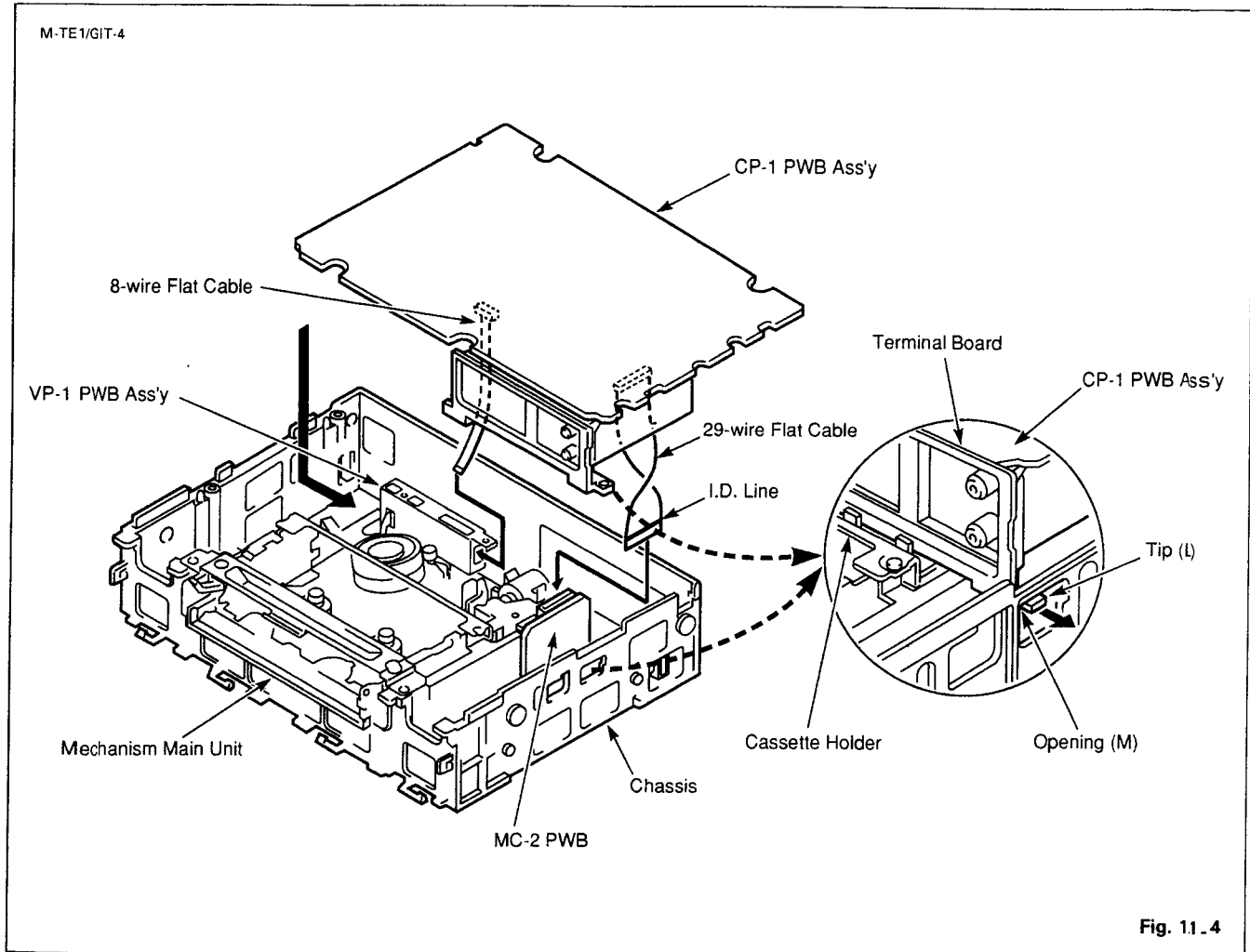


Fig. 1.1.3

TEMPORARILY SETTING UP AND CONNECTING MAIN PWB ASSEMBLY

The following is an example of how to place and connect the main PWB not requiring a jig, when repairing the CP-1 PWB assembly (Fig. 1.1.4)

1. Place the mechanism main unit at the fixed position on the chassis.
2. Connect the 29-wire flat cable to the MC-2 PWB, and the 8-wire flat cable to the VP-1 PWB Ass'y respectively. Connect the TM-1 PWB Ass'y to operate VCR by using the remote control.
3. Place the CP-1 PWB Ass'y above the mechanism main unit along the cassette holder. Insert the tip (L) of the terminal board into the opening (M) at the side of the chassis, as shown in the enlarge view.



1-2. MAIN CIRCUIT BOARD LOCATIONS

L-TE1/GIT

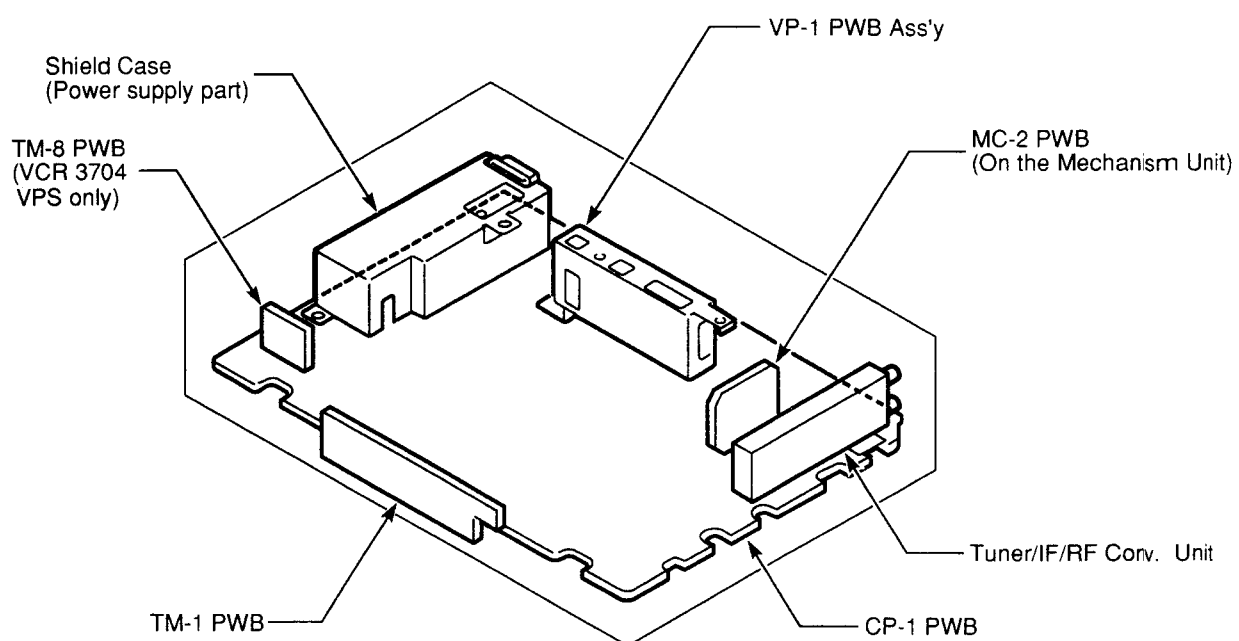


Fig. 1.2.1

2. ELECTRICAL ADJUSTMENT

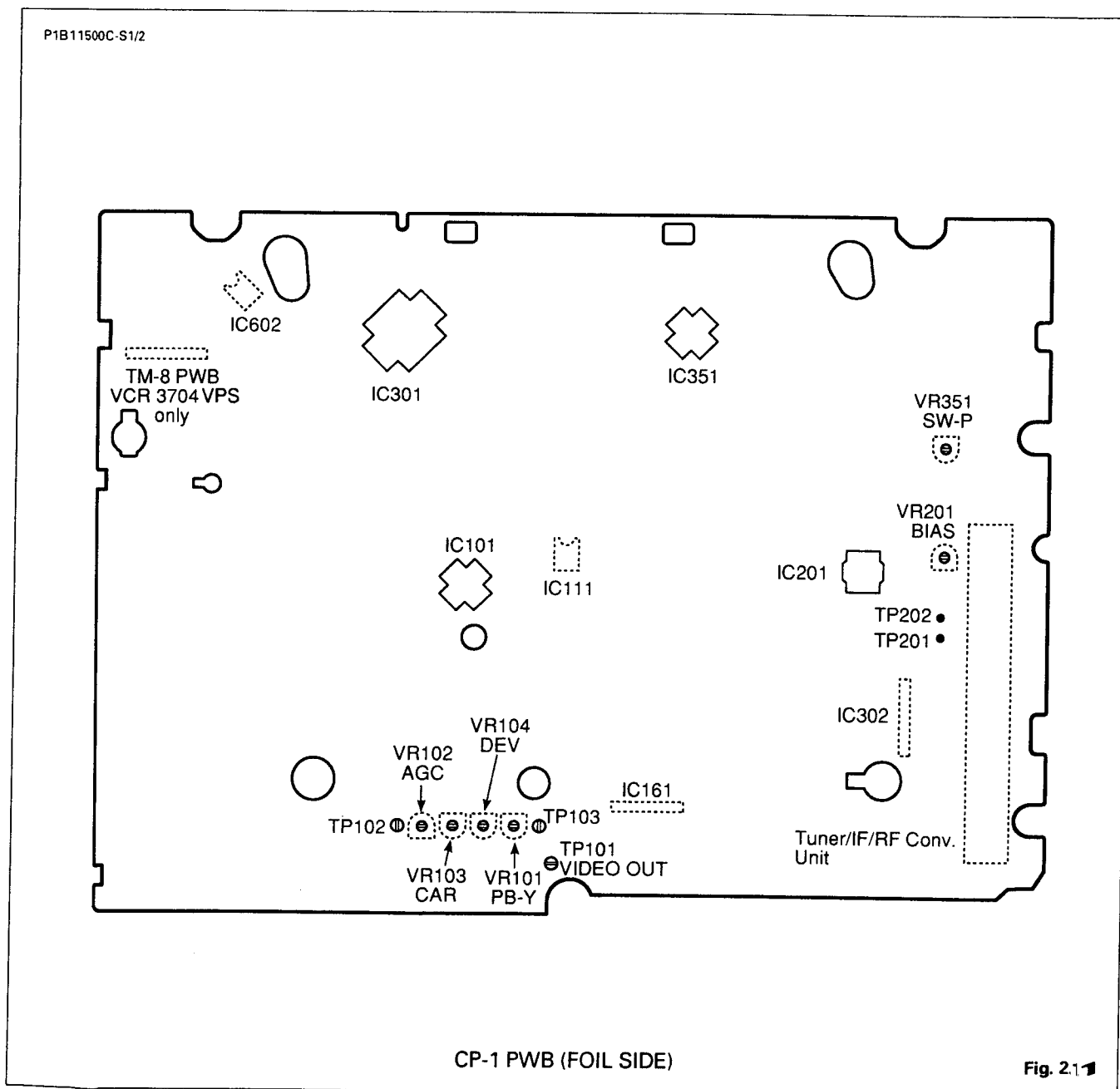
2-1. SERVO CIRCUIT ADJUSTMENT

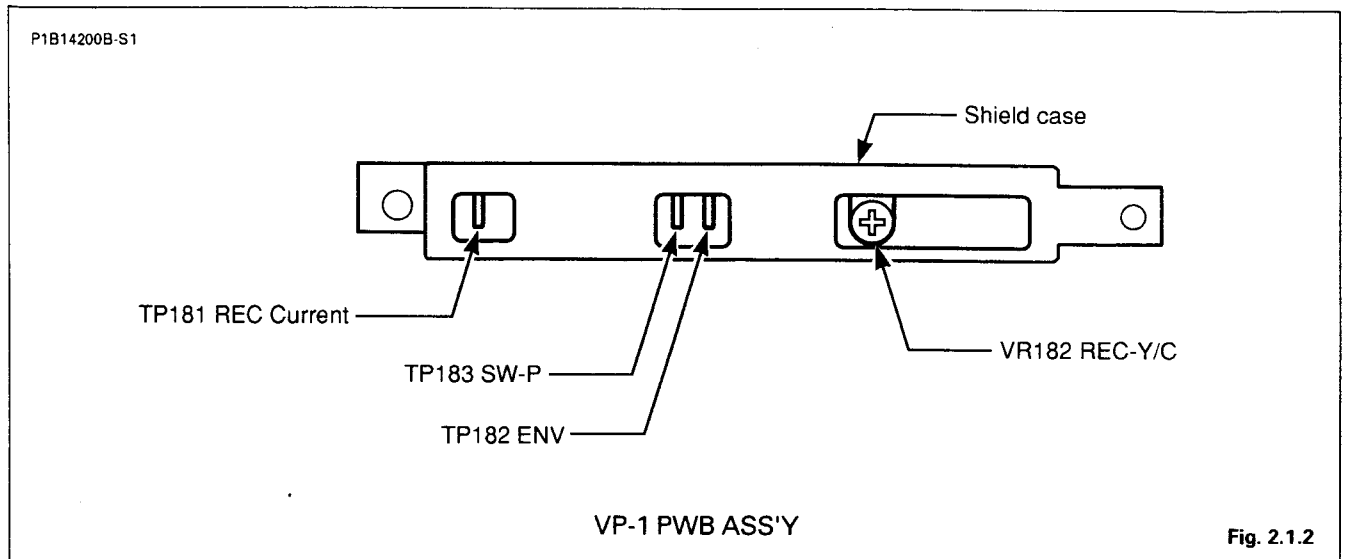
- These adjustments should be carried out upon completion of the tape transport adjustments.
- If the tape transport adjustments (except the tilt adjustment) are carried out after these adjustments, follow the procedures again in Section 2-1-3. SWITCHING POSITION ADJ.
- When a cassette tape is loaded, auto-tracking will be set immediately after starting the first playback. As this will deviate the tracking center set, be sure to press the channel buttons (Δ) or (∇) once directly after starting playback to prevent auto-tracking from being set.

2-1-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Oscilloscope	Vertical sensitivity: 5 mV/DIV, external trigger Band width: more than 10 MHz
Test Tape	VHJ-0009 or VHJ-0023: SP mode, monoscope, 6 KHz
Blank Tape	VHS-type cassette tape
Monitor TV	

2-1-2. LOCATION OF ADJUSTMENT POINTS



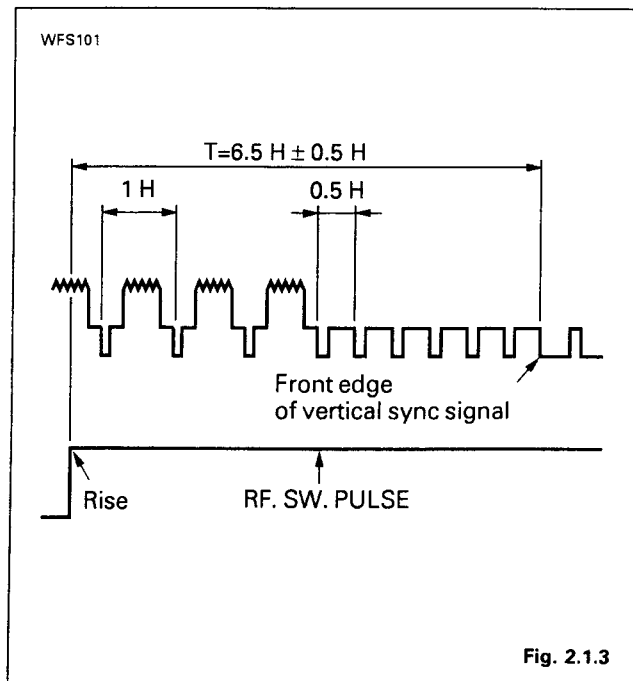
**NOTE:**

- Self-recording means "Record any broadcasting or video signal and play back the just-recorded portion".

2-1-3. SWITCHING POSITION ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101 (VIDEO OUT) TP183 (SW-P)	Oscilloscope	PLAY(SP) mode Test tape (VHJ-0009 or VHJ-0023)
ADJ. Location		ADJ. Value
VR351 (SW-P)		$6.5 H \pm 0.5 H$

- Set the tracking control position to the center by pressing CHANNEL buttons (Δ) and (∇) simultaneously. (Tracking center position display in the indicator panel "T -:- ")
- Adjust VR351 (SW-P) so that the width "T" becomes $6.5 H \pm 0.5 H$ as shown in Fig. 2.1.3.

**2-1-4. STILL V-LOCK ADJ.**

Measuring Point	Measuring Equipment	ADJ. Condition
Picture of monitor TV	Color bar generator or Broadcasting Monitor	Self-recording (SP mode) STILL mode Blank tape
ADJ. Location		ADJ. Value
CHANNEL (Δ) button CHANNEL (∇) button		The minimum vertical shake

- Play back the just-recorded portion and then set the VCR in the STILL mode.
- Press the CHANNEL (Δ) button or the CHANNEL (∇) button so that any vertical shake of the picture is brought to its minimum.

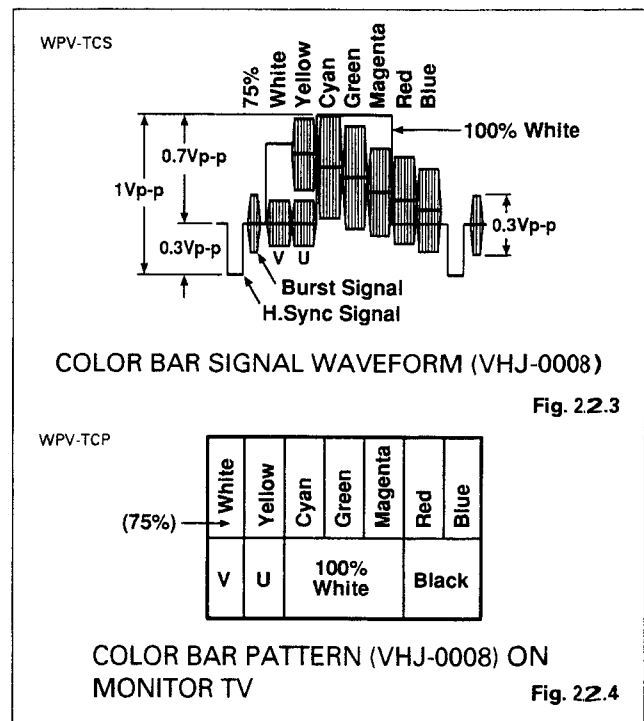
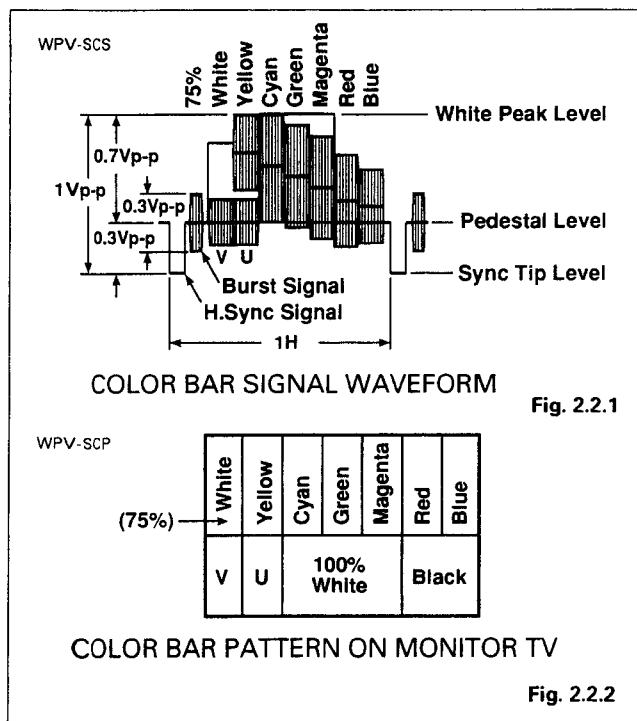
2-2. VIDEO CIRCUIT ADJUSTMENT

- Before making the following adjustments, Section 2-1. SERVO CIRCUIT ADJUSTMENT should be completed.
- Use the relay jig to provide simple adjustment of the VP-1 PWB Ass'y.

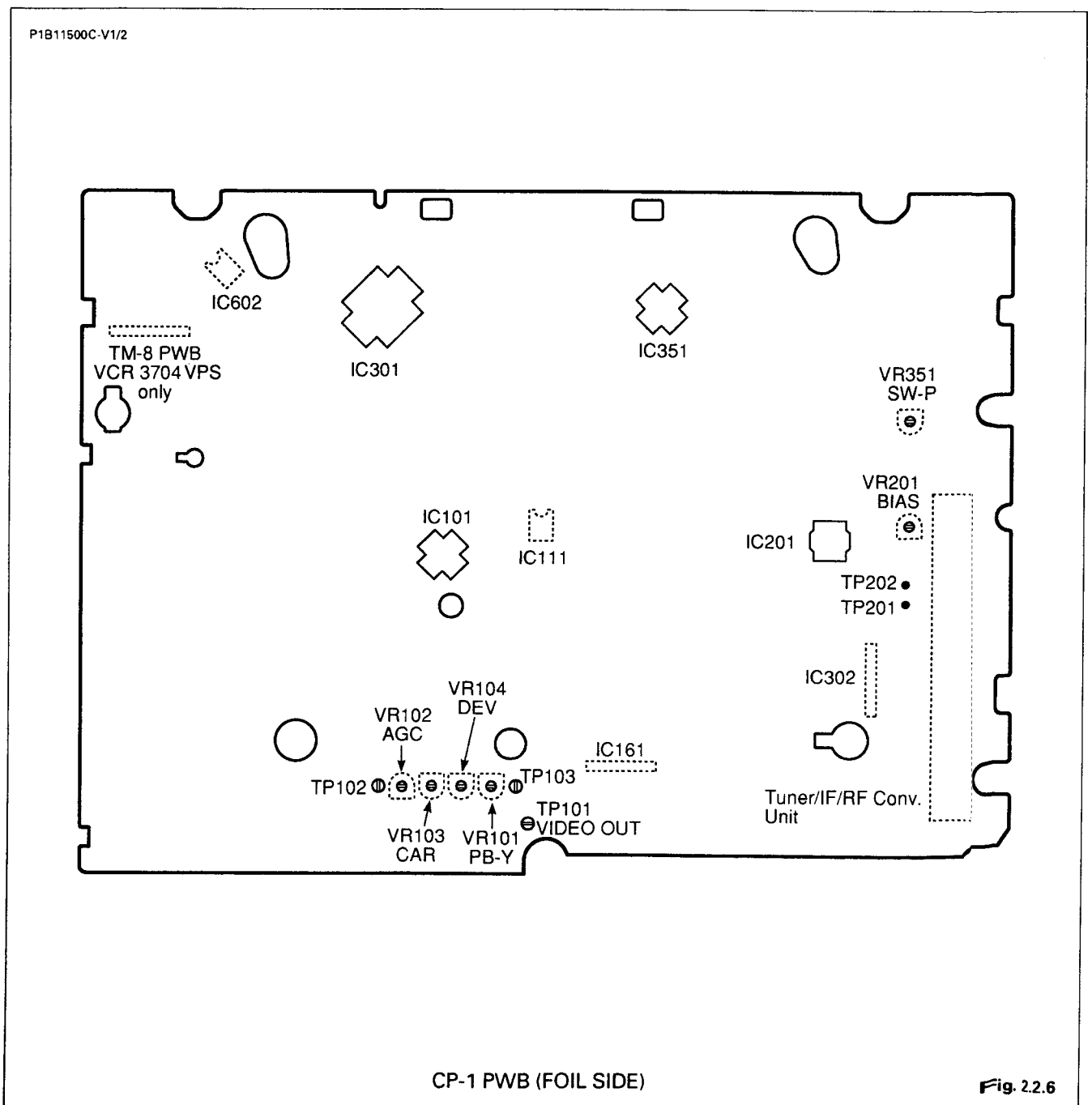
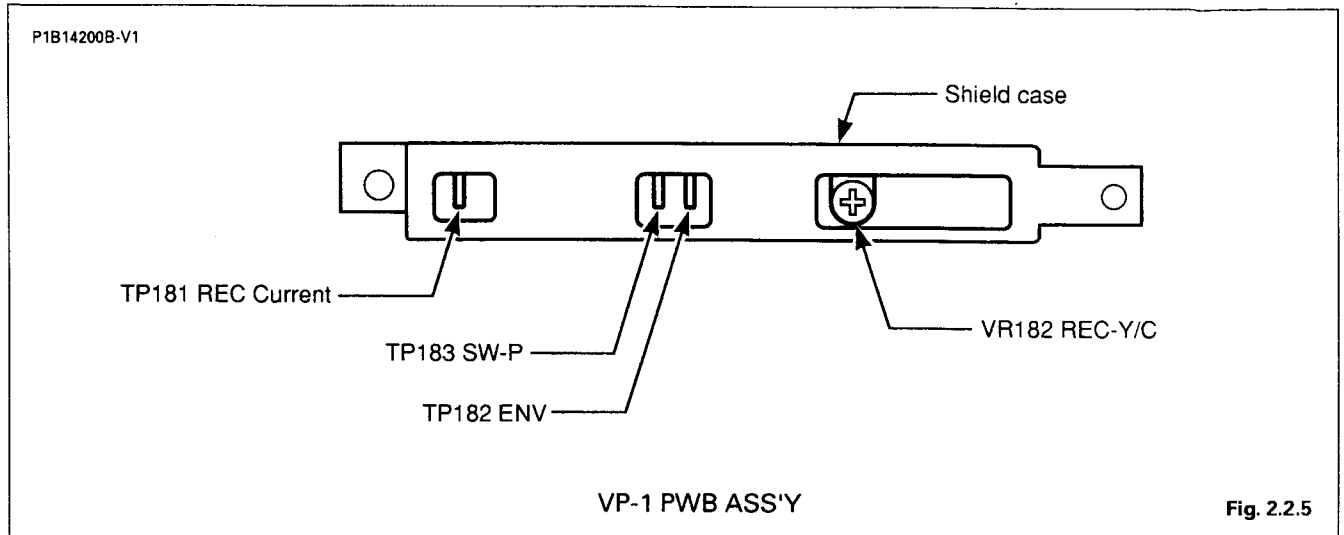
2-2-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Color Bar Signal Generator	PAL Color bar signal with 100% white level (EBU color bar signal) (Signal waveform is described below. Refer to Fig. 2.2.1)
Oscilloscope	Vertical sensitivity: 5 mV/DIV, external trigger Band width: more than 10 MHz
Digital Voltmeter	DC range
Test Tape	VHJ-0008 or VHJ-0023: SP mode, color bar, 1kHz (Color bar signal waveform is described below. Refer to Fig. 2.2.3)
Blank Tape	VHS-type cassette tape
Oscilloscope Probe	Input capacity: less than 25 pF (10:1) less than 40 pF (1:1) Covering frequency: DC ~ 40 MHz (10:1) DC ~ 30 MHz (1:1)
Frequency Counter	8 significant digits
Adjustment Relay Jig	VHJ-0065: 5-wire flat cable for VP-1 PWB Ass'y

PAL TV TEST SIGNAL

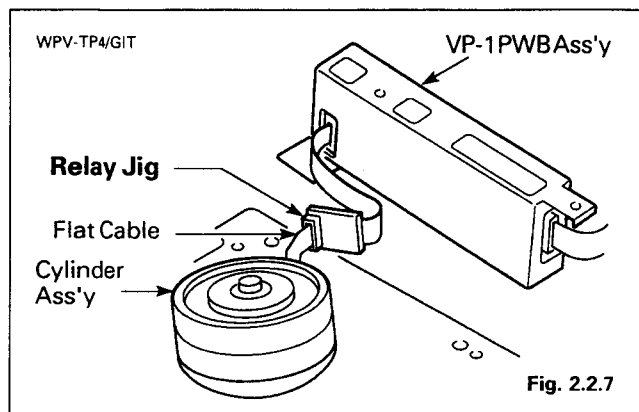


2-2-2. LOCATION OF ADJUSTMENT POINTS



2-2-3. ADJUSTMENT RELAY JIG

Connect the Flat cable end from the Cylinder Ass'y to the VP-1 PWB Ass'y using the Relay jig to provide simple repairing and adjustment of the VP-1 PWB Ass'y, as shown in Fig. 2.2.7. Further, when adjusting the VP-1 PWB Ass'y, be sure to make contact an end of Shield case with Bracket of the VP-1 PWB Ass'y to maintain the shield effect. If the VP-1 PWB Ass'y does not contact, there is insufficient ground and no proper play back image can be obtained.



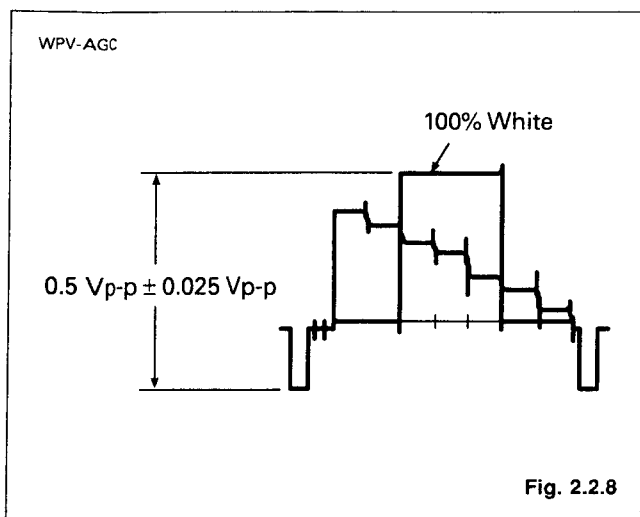
NOTES:

- Self-recording means "Record the video signal and play back the just-recorded portion".
- Connect the monitor TV to the VIDEO OUTPUT terminal, before making following adjustments.
- ASO HIGH button to the OFF position.

2-2-4. AGC LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP102	Color bar generator Oscilloscope (10:1 probe)	E-E mode
ADJ. Location		ADJ. Value
VR102 (AGC)		$0.5 \text{ Vp-p} \pm 0.025 \text{ Vp-p}$

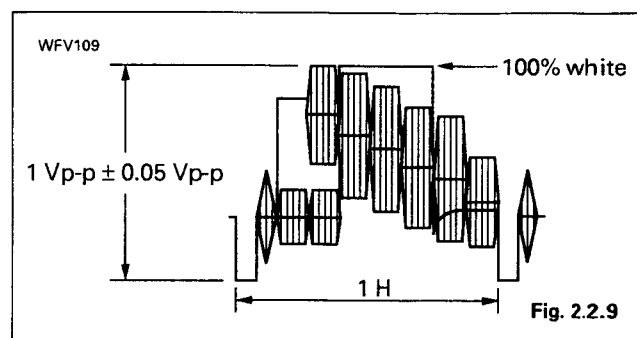
1. Connect the color bar generator to the VIDEO INPUT terminal.
2. Adjust VR102 (AGC) for $0.5 \text{ Vp-p} \pm 0.025 \text{ Vp-p}$ as shown in Fig. 2.2.8.



2-2-5. PB-Y LEVEL ADJ.

Measuring Point	Measuring Equipment	ADJ. Condition
TP101	Oscilloscope	PLAY(SP)mode Test tape (VHJ-0008 or VHJ-0023)
ADJ. Location		ADJ. Value
VR101 (PB-Y)		$1 \text{ Vp-p} \pm 0.05 \text{ Vp-p}$

1. Play back a test tape in SP mode.
2. Adjust VR101 (PB-Y) for the video luminance signal level of $1 \text{ Vp-p} \pm 0.05 \text{ Vp-p}$. (Refer to Fig. 2.2.9)



2-2-6. CARRIER SET ADJ.

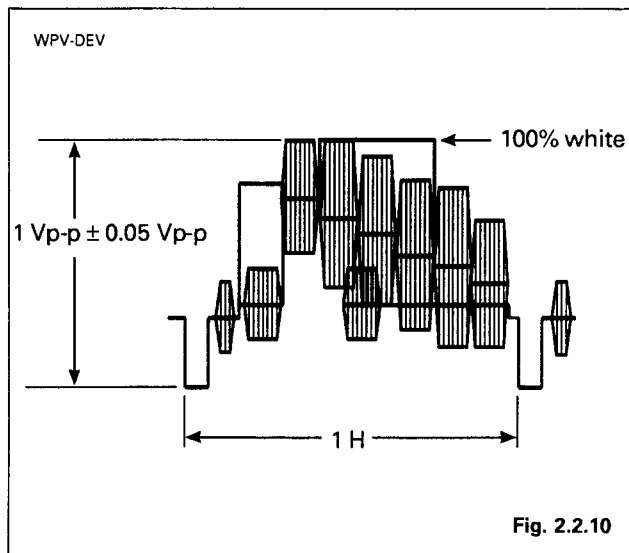
Measuring Point	Measuring Equipment	ADJ. Condition
TP103	Color bar generator Frequency counter	REC (SP) mode
ADJ. Location		ADJ. Value
VR103 (CAR)		$3.83 \text{ MHz} \pm 0.05 \text{ MHz}$

1. Connect the color bar generator to the VIDEO INPUT terminal.
2. After removing the first color bar signal input from the video input terminal, immediately adjust VR103 (CAR) so that the frequency becomes $3.83 \text{ MHz} \pm 0.05 \text{ MHz}$.

2-2-7. DEVIATION ADJ.

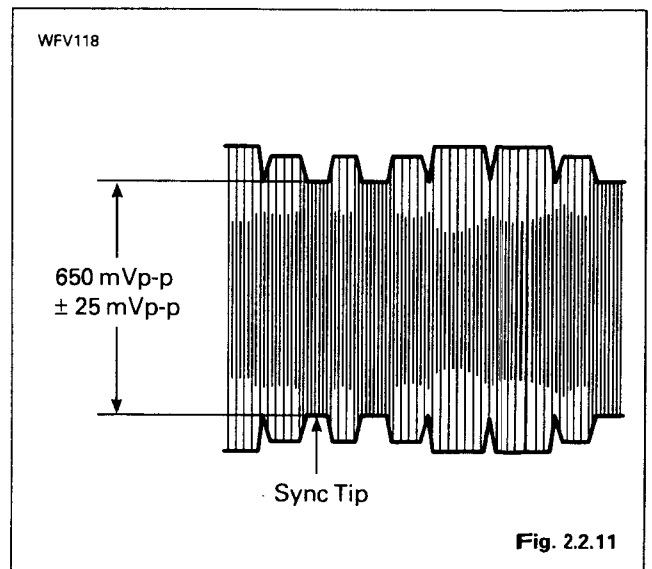
Measuring Point	Measuring Equipment	ADJ. Condition
TP101	Color bar generator Oscilloscope	Self-recording (SP) mode Blank tape
ADJ. Location		ADJ. Value
VR104 (DEV)		1 Vp-p $\pm$ 0.05Vp-p

1. Record the color bar signal on the blank tape.
2. Play back of the just-recorded portion.
3. Adjust VR104 (DEV) for **1 Vp-p $\pm$ 0.05 Vp-p** as shown in Fig. 2.2.10.
4. If the adjustment value is not satisfactory, adjust VR104 (DEV) and repeat steps 2 to 3.

**2-2-8. Y/C REC CURRENT ADJ.**

Measuring Point	Measuring Equipment	ADJ. Condition
TP181 (on VP-1 PWB)	Color bar generator Oscilloscope (1:1 probe)	REC(SP)mode Blank tape
ADJ. Location		ADJ. Value
VR182 (REC-Y/C)		650 mVp-p $\pm$ 25 mVp-p

1. Connect the ground of the oscilloscope to the shield case of the VP-1 PWB Ass'y.
2. Adjust VR182 (REC-Y/C) so that the video luminance signal level at the sync tip is **650 mVp-p $\pm$ 25 mVp-p**. (Refer to Fig. 2.2.11)



2-3. AUDIO CIRCUIT ADJUSTMENT

- Before making these adjustments, (especially, the tape guide height and audio control erase head height adjustments) should be carried out, so that the tape traveling between the loading guide pole and the audio control erase head runs without fluttering, twisting, curling.
- Before making these adjustments, Section 2-1. SERVO and Section 2-2. VIDEO circuit adjustments should be carried out.

2-3-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Standard Audio Signal Generator (SG)	Output frequency : 10 Hz ~ 20 kHz Output level : more than 1 Vrms Output impedance : 600 Ω Distortion ratio : less than 0.1% Output in use SG : Frequency: 1 kHz, 10 kHz (switchable) Output level: -33.8 dBs $\pm$ 0.5 dB
Color Bar Signal Generator	Color bar signal with 100% white level. (Signal waveform is described before. Refer to Fig. 2.2.1)
Oscilloscope	Vertical sensitivity : 10 mV/DIV Band width : more than 30 MHz
AC Voltmeter	Effective value indication Input frequency : 10 Hz ~ 20 kHz Input Impedance : more than 1 M Ω Measurement level : 1mV (full scale)
Blank Tape	VHS-type cassette tape

2-3-2. LOCATION OF ADJUSTMENT POINTS

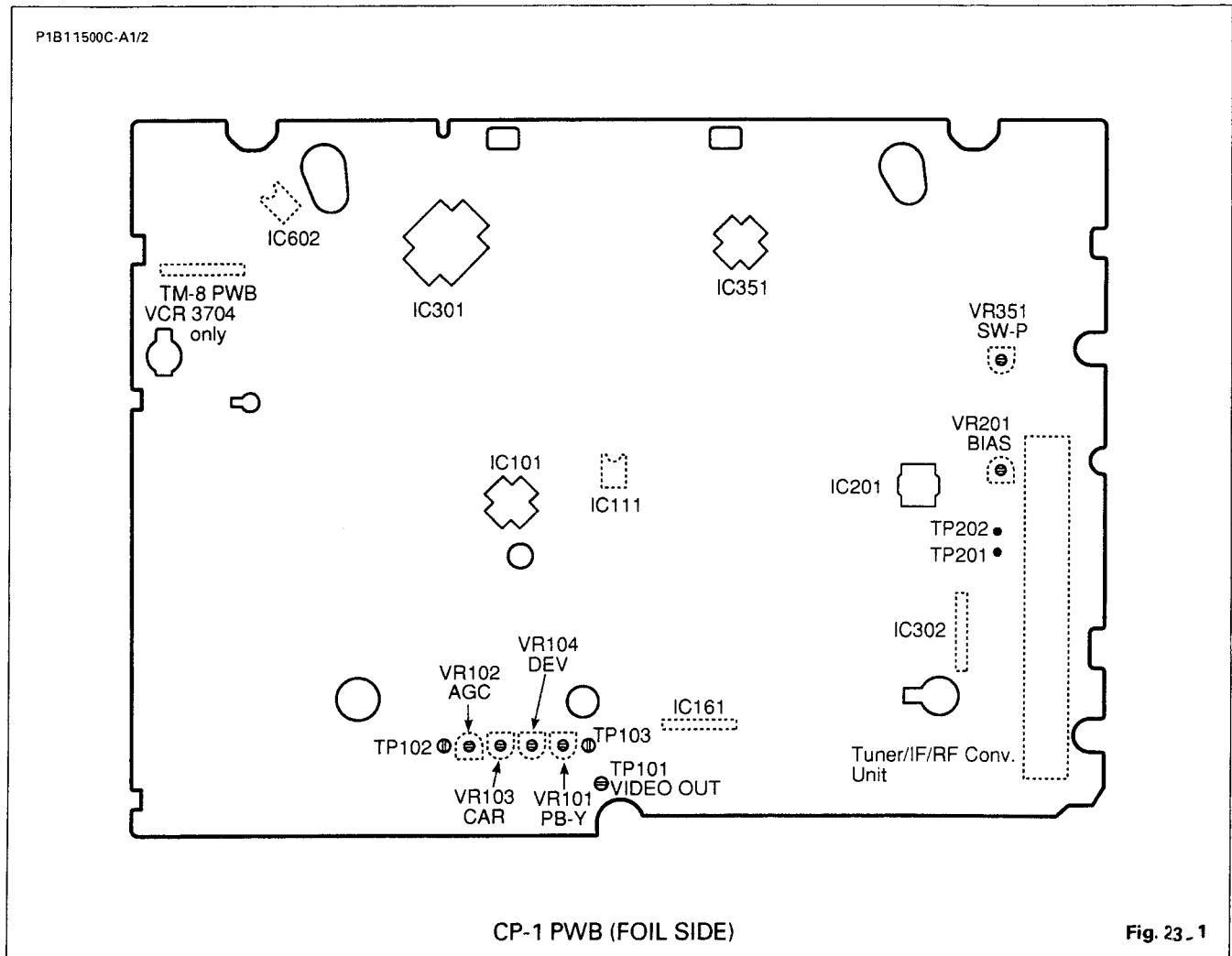


Fig. 23.1

NOTE:

- Self-recording means "Record the audio signal and play back the just-recorded portion".

2-3-3. BIAS LEVEL ADJ.**[A]**

Measuring Point	Measuring Equipment	ADJ. Condition
TP201 (HOT) TP202 (GND)	Oscilloscope AC voltmeter	REC (SP) mode Blank tape
ADJ. Location		ADJ. Value
VR201 (BIAS)		24 mVrms

1. Load the VCR with a blank tape and select the SP record mode without all incoming signal.
2. After confirming on the oscilloscope that a 70 kHz sine wave is being output, adjust VR201 (BIAS) so that the AC voltmeter's reading is **24 mVrms**.

[B]

Measuring Point	Measuring Equipment	ADJ. Condition
AUDIO OUTPUT terminal	Oscilloscope AC voltmeter Standard audio signal generator (SG: signal -33.8 dBs, 400 Hz -33.8 dBs, 10 kHz)	Self-recording (SP mode) Blank tape)
ADJ. Location		ADJ. Value
VR201 (BIAS)		-4 dB ~ +4 dB between 400 Hz and 10 kHz

1. Connect the standard audio signal generator to the AUDIO INPUT terminal.
2. Set the standard audio signal generator's output level to -33.8 dBs.
3. Set the standard audio signal generator's frequency to 400 Hz and then 10 kHz. Record each of these frequency signals.
4. Play back each of the just-recorded portion.
5. Confirm that the 10 kHz level on AC voltmeter's reading is **from -4 dB to +4 dB**, compared with 400 Hz level.
6. If the 10 kHz level is less than -4 dB below 400 Hz level or more than +4dB above 400Hz level, Rotate VR201 (BIAS) slightly to adjust it.
7. Repeat steps 3 through 6 if necessary.

2-4. TUNER AND IF CIRCUITS ADJUSTMENT

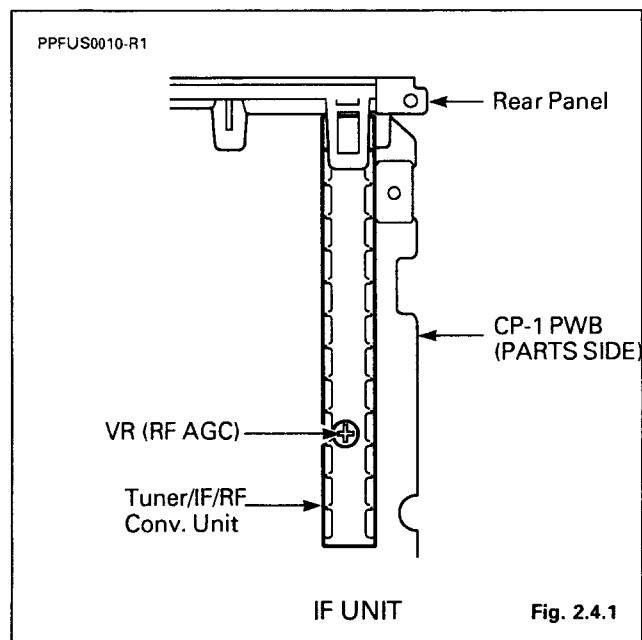
- When any malfunction occurs in the TUNER circuit the whole unit must be replaced.
- An adjustment of the IF circuit is shown as follows.

NOTE: The TUNER unit does not need any adjustments, because precise adjustments have been down before shipment.

2-4-1. TEST EQUIPMENT AND STANDARDS REQUIRED

Monitor TV	
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2-4-2. LOCATION OF ADJUSTMENT POINT



2-4-3. RF AGC ADJ.

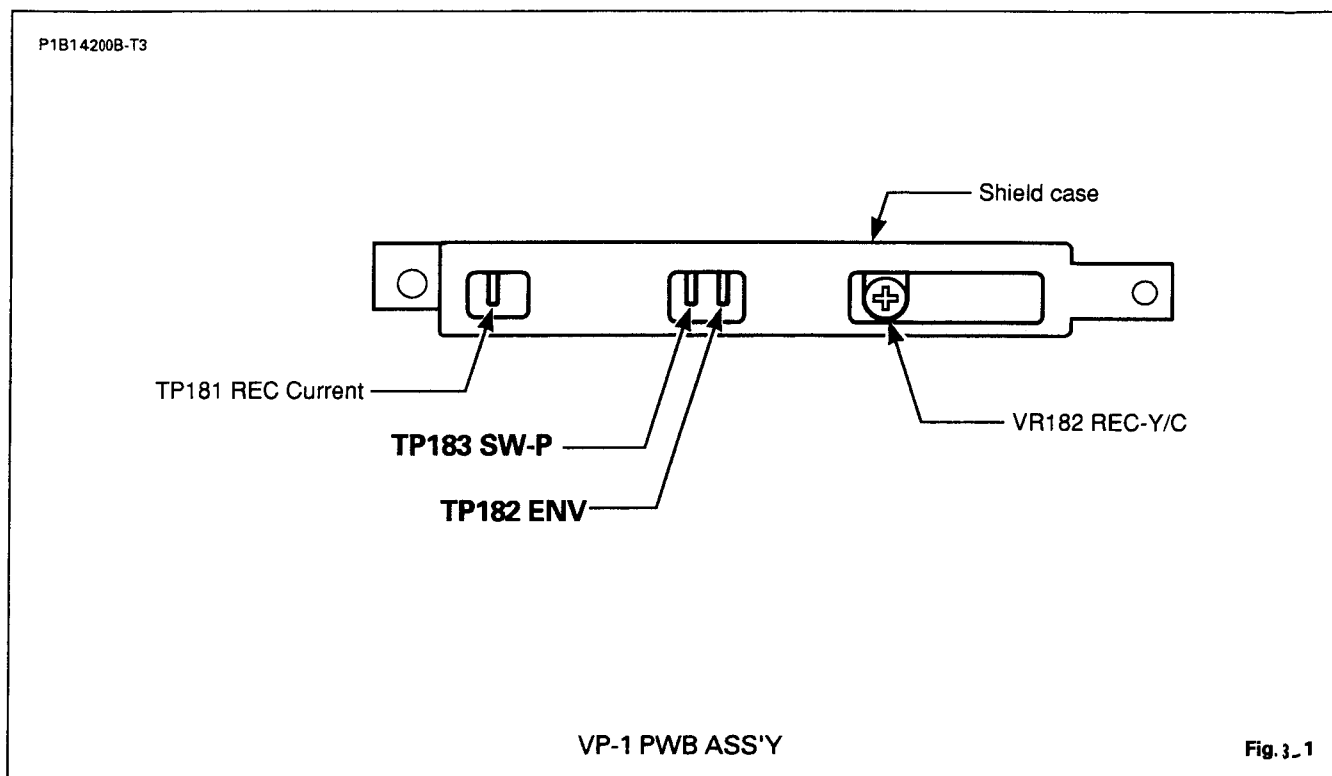
Measuring Point	Measuring Equipment	ADJ. Condition
Picture of monitor TV	Monitor TV	E-E mode
ADJ. Location		ADJ. Value
VR (RF AGC) (on the IF circuit)		S/N is best point

1. Connect the monitor TV to VHF/UHF ANTENNA OUTPUT terminal.
2. Connect the VHF antenna to VHF/UHF ANTENNA INPUT terminal.
3. Receive the middle electrical field (70 dB μ ~ 90 dB μ) of the VHF high channel, and slowly turn VR (RF AGC) from the point where snow-noise is present to the point where it just disappears from the monitor TV.
4. Confirm by monitor TV that there is no beat and saturation (S/N is best point) when receiving any TV channel.

3. TEST POINT FOR TAPE PATH ADJUSTMENT

Test point TP182 (ENV) and TP183 (SW-P) for tape path adjustment is shown in Figure below.

For adjustment, refer to the separate volume "Mechanical adjustments 6611 77 06 and 6611 74 46".



NOTE

4. PARTS LIST

ACCESSORIES

LOCATION	PARTS NO.	DESCRIPTION
	5652 2306	REMOCON(WITH COVER BATTERY)
	6134 5351	COVER BATTERY(FOR REMOCON)
	6612 5919	INSTRUCTION MANUAL (VCR 3704VPS ONLY)
OR	6612 5920	INSTRUCTION MANUAL(VCR 3704 ONLY)
OR	6612 5922	INSTRUCTION MANUAL(VCR 3704EE ONLY)
	4131 4198	CABLE,ANT(VCR 3704VPS ONLY)
OR		CABLE,ANT(VCR 3704VPS ONLY)
OR	4131 4221	CABLE,ANT(EXCEPT VCR 3704VPS)
OR	4131 4286	CABLE,ANT(EXCEPT VCR 3704VPS)
OR	4131 4203	CORD(EXCEPT VCR 3704VPS)
OR		CORD(EXCEPT VCR 3704VPS)
	△ 4131 8829	CORD,POWER
OR	△	CORD,POWER
OR	△	CORD,POWER
OR	△	CORD,POWER

PACKING MATERIALS

LOCATION	PARTS NO.	DESCRIPTION
	6162 8875	CARTON CASE(VCR 3704VPS ONLY)
OR	6162 8874	CARTON CASE(VCR 3704 ONLY)
OR	6162 8884	CARTON CASE(VCR 3704EE ONLY)
	6172 3091	CUSHION,FRONT
	6172 3092	CUSHION,BACK
		POLYE COVER,INNER-K

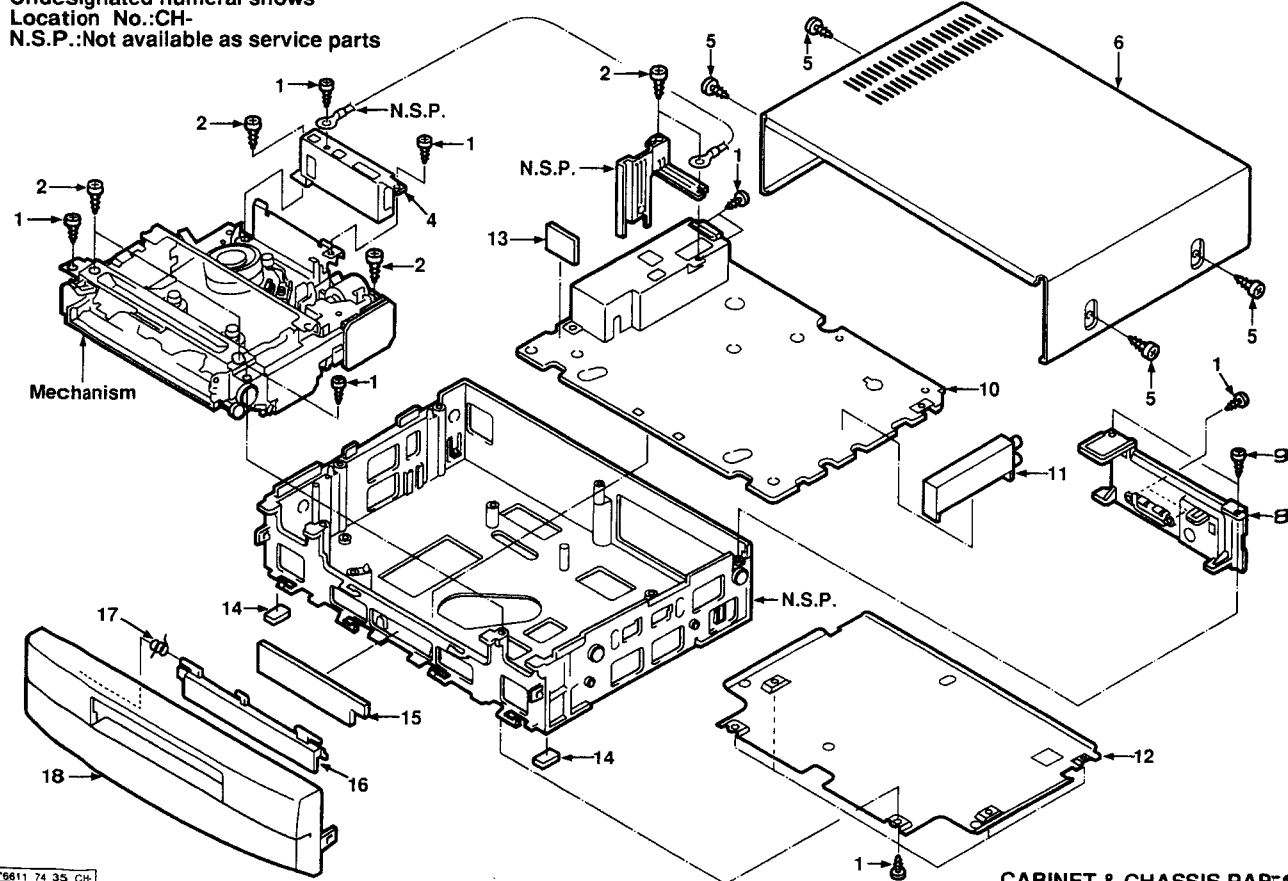
CABINET & CHASSIS PARTS

LOCATION	PARTS NO.	DESCRIPTION
CH-1		SCR L-TPG BIN 3X10
CH-2		SCR S-TPG BIN 4X12
CH-4	6913 6666	COMPL PWB,VP-1
CH-5		SPECIAL SCREW
CH-6	6135 5180	COMPL COVER TOP(VCR 3704EE ONLY)
OR	6135 5175	COVER TOP(EXCEPT VCR 3704EE)
CH-8	8681 5271	TERMINAL
CH-9		SCR S-TPG BIN 3X10
CH-10	6913 6668	COMPL PWB,CP-1-A(VCR 3704VPS ONLY)
OR	6913 6667	COMPL PWB,CP-1-A(VCR 3704 ONLY)
OR	6913 6690	COMPL PWB,CP-1-A(VCR 3704EE ONLY)
CH-11	5823 0508	TUNER,RF/TU/IF(EXCEPT VCR 3704EE)
OR	5823 0603	TUNER,RF/TU/IF(VCR 3704EE ONLY)
CH-12	6135 5174	COVER BOTTOM
CH-13	6913 0957	COMPL PCB,TM-8(VCR 3704VPS ONLY)
CH-14	6273 4052	STAND,FELT,FRONT
CH-15	6913 6665	COMPL PWB,TM-1
CH-16	6134 5348	DOOR CASSETTE
CH-17	7358 4829	SPRING
CH-18	6418 3422	ASSY,CABINET FRONT

Undesignated numeral shows

Location No.:CH-

N.S.P.:Not available as service parts



CABINET & CHASSIS PARTS

*6611 74 35, CH

MECHANISM PARTS

CB602700
MB00182Z

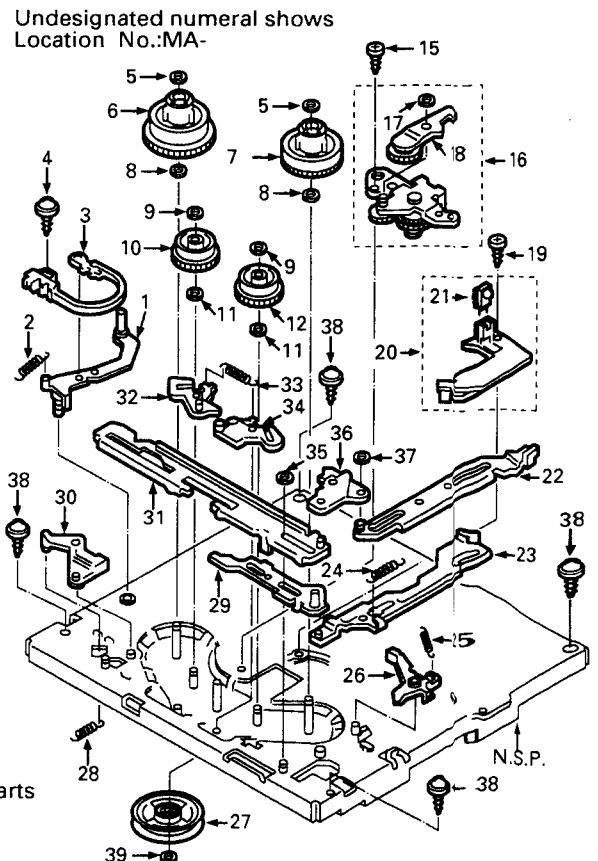
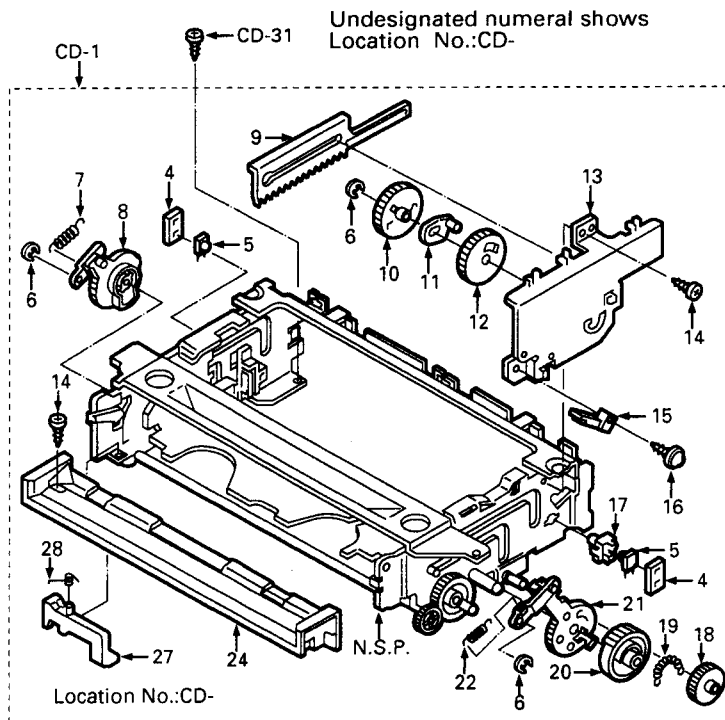
LOCATION PARTS NO. DESCRIPTION

MECHANISM PARTS 1

CD-1	8318 6017	COMPL,CASSETTE MECHA
CD-4	8681 4250	LID
CD-5	3656 3089	PHOTO COUPLE PN150SAN
CD-6		RING E 2.3
CD-7	7358 4341	SPRING, LINK L
CD-8	7525 1181	ASSY, GEAR, LEVER L
CD-9	8318 5316	RACK
CD-10	7525 1399	GEAR, LOCK
CD-11	8318 5317	ASSY, LEVER, PINION
CD-12	7525 1183	GEAR, PINION
CD-13	8681 4097	ASSY, BRACKET, GEAR
CD-14		SCR S-TPG BIN 2.6X4
CD-15	4112 7484	SW, SPECIAL
CD-16		SCR PAN+SW+W 2X9
CD-17	8681 4816	HOLDER, TRANSISTOR
CD-18	7525 1184	GEAR, IDLER
CD-19	7358 4363	SPRING, GEAR MAIN
CD-20	7525 1185	GEAR, MAIN
CD-21	7525 1186	ASSY, GEAR, LEVER R
CD-22	7358 4342	SPRING, LINK R
CD-24		BOARD, UNDER
CD-27	8318 5860	LEVER, SAFETY SW
CD-28	7358 4713	SPRING, SAFETY SW
CD-31		SCR BIN 3X6
MA-1	8681 4388	ASSY, LEVER, TENSION
MA-2	7358 4390	SPRING, LEVER TENSION
MA-3	8681 4120	ASSY, HOLDER, BAND
MA-4		SCR PAN+SW+W 2.6X6
MA-5		WASHER Y 2.6X6X0.25
MA-6	6253 4244	ASSY, REEL, SUPPLY
OR	6253 4246	ASSY, REEL, SUPPLY
MA-7	6253 4245	ASSY, REEL, TAKE UP
OR	6253 4255	ASSY, REEL, TAKE UP

LOCATION PARTS NO. DESCRIPTION

MA-8	7726 0615	SPECIAL WASHER 3.1X6X0.3
OR	7726 0594	SPECIAL WASHER 3.1X6X0.4
OR	7726 0585	SPECIAL WASHER 3.1X6X0.5
MA-9	6158 2019	WASHER Y 2.1X5X0.25
OR		WASHER Y 2.1X6X0.25
MA-10	7525 1348	GEAR, REEL SUPPLY
OR	7525 1398	GEAR, REEL SUPPLY
MA-11	7726 0618	SPECIAL WASHER 2.6X6X0.25
MA-12	7525 1349	GEAR, REEL TAKE UP
OR	7525 1397	GEAR, REEL TAKE UP
MA-15		SPECIAL SCREW 2.6X4
MA-16	7548 4261	COMPL, IDLER, CLUTCH
MA-17		WASHER Y 2.1X4X0.25
MA-18	7548 4260	ASSY, IDLER
MA-19		SCR S-TPG BIN 2.6X8
MA-20	6913 1130	COMPL PCB, MC-4
MA-21	3681 1690	LED LN59
MA-22	8681 4121	ASSY, SLIDE, ACT PLATE
MA-23	8681 5262	SLIDE, C BRAKE
MA-24	7358 4345	SPRING, RETURN SLIDE
MA-25	7358 4346	SPRING, SUB T
MA-26	8681 4382	ASSY, BRAKE SUB T
MA-27	7548 4226	PULLEY, REEL
MA-28	7358 4347	SPRING, SUB SUPPLY
MA-29	8681 4105	SLIDE, ACT BRAKE
MA-30	8681 4163	BRAKE, SUB SUPPLY
MA-31	8681 4107	ASSY, SLIDE, M PLATE
MA-32	8681 4108	ASSY, BRAKE, SUPPLY
MA-33	7358 4488	SPRING, MAIN BRAKE
MA-34	8681 4109	ASSY, BRAKE, TAKE UP
MA-35		WASHER Y 2.6X5X0.5
MA-36	8681 4110	LEVER, CONT PLATE
MA-37	7726 0611	SPECIAL WASHER
MA-38		SCR S-TPG BIN 4X12
MA-39		SPECIAL WASHER 2.4X6X0.25



N.S.P.:Not available as service parts

92EP1/MA-1

LOCATION	PARTS NO.	DESCRIPTION
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MECHANISM PARTS 2

DR-1	4335 9374	COMPL,CYLINDER,2N2P-V
OR		COMPL,CYLINDER,2N2P-V
DR-2		SCR PAN+W 3X8
DR-3	4335 9343	ASSY,CYLINDER,UPR 2N2P-V
DR-4	4335 9463	ASSY,CYLINDER,LWR 2AL
OR	4335 9308	ASSY,CYLINDER,LWR2
DR-5	8318 5783	SPACER,MOTOR 0.3T
DR-6	8681 4885	BASE,CYLINDER
DR-7		SCR PAN+FLG 3X6
DR-8		SCR PAN+FLG 2.6X8
DR-9	4335 9337	STATOR,MOTOR CYL
OR		STATOR,MOTOR CYL
DR-10		SCR PAN+SW 2.3X10
OR		SCR PAN+SW 2.3X8
DR-11	4335 9317	ROTOR,MOTOR CYL
DR-12		SCR PAN+SW 2.3X6

MB-1	8318 5862	SLEEVE
MB-2	7726 0622	SPECIAL WASHER
MB-3	8318 5863	TAPE GUIDE
MB-4		NUT HEX (3)
MB-5	8681 4881	CAP
MB-6	8681 4112	ASSY,SLIDE,ACT PINCH
MB-7	8681 4113	ASSY,LEVER,CAM PINCH
MB-8	6158 2016	WASHER Y 3.1X8X0.5
MB-9	7358 4350	SPRING,ACE HEAD
MB-10	8681 5249	COMPL,BRACKET,HEAD
MB-11	7726 0653	SLEEVE,ACE HEAD
MB-12	7711 0176	SPECIAL NUT (M5)
MB-13		SCR PAN+SW+W 2.6X5
MB-14	8681 4817	BRACKET,STOPPER
MB-15	7358 4352	SPRING,SLIDE BRAKE
MB-16	8681 4927	COMPL,SLIDE,CAM
MB-17	7358 4351	SPRING,LINK LOCK
MB-18	7522 0219	DAMPER
MB-19	7525 1193	GEAR,FRONT LOAD
MB-20	8681 4384	ASSY,LEVER,FRONT
MB-21	7525 1347	GEAR,HELICAL FRONT
MB-22		SCR PAN+SW+W 2.6X6
MB-23		SCR S-TPG PAN 2.6X8
MB-24		SCR S-TPG BIN 2.6X8
OR		SCR S-TPG PAN 2.6X8
MB-28	8681 4127	HOLDER,WORM
MB-29		WASHER
MB-30	7525 1195	ASSY,WORM,FRONT
MB-31	8318 5722	BRACKET,HOLDER
MB-32	8318 5532	PLATE,NUT
MB-33	8868 0723	DAMPER,MOTOR
MB-34	8681 4123	DAMPER,WORM
MB-35	4432 8818	ASSY,LOADING MOTOR
MB-36	8868 0724	DAMPER,MOTOR
MB-37	6913 1082	COMPL PCB,MC-3
MB-38	6913 6691	COMPL PWB,MC-2
MB-39	4112 9866	ROTARY SWITCH
MB-40		SCR PAN 2.6X13
MB-41	8681 4385	ASSY,SLIDE,FRONT
MB-42	7358 4457	SPRING,LEVER LOAD
MB-43	7358 4458	SPRING,LEVER ACT
MB-44	8681 4386	HOLDER,WORM
OR	8681 4977	HOLDER,WORM

LOCATION	PARTS NO.	DESCRIPTION
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MB-45		WASHER 2.1X6X0.5
MB-46	7525 1264	ASSY,WORM,LOAD
MB-47	7618 4267	BELT,LOADING
MB-48		WASHER SLIT 2.6X5X0.50
MB-49	7525 1191	GEAR,HELICAL
MB-50	8681 4628	ASSY,LEVER,REV GUIDE
MB-51	7358 4356	SPRING,REVIEW LEVER
MB-52	7538 3373	COMPL,PINCH ROLLER
MB-53	7358 4830	SPRING,PINCH ROLLER
MB-54	6158 2015	WASHER Y 3.6X6X0.5
MB-55	8681 4128	COMPL,LEVER,ACT BRAKE

Note:

As shown in the figure, the parts supporting the "ASSY, GUIDE, ROLLER" of Location No. MB-61 comes in two types-group A and group B. (Location MB-60 and 61 are the same.) No one part of group A can be replaced by that of group B by itself, but group A and group B can be replaced as a whole as they are interchangeable.

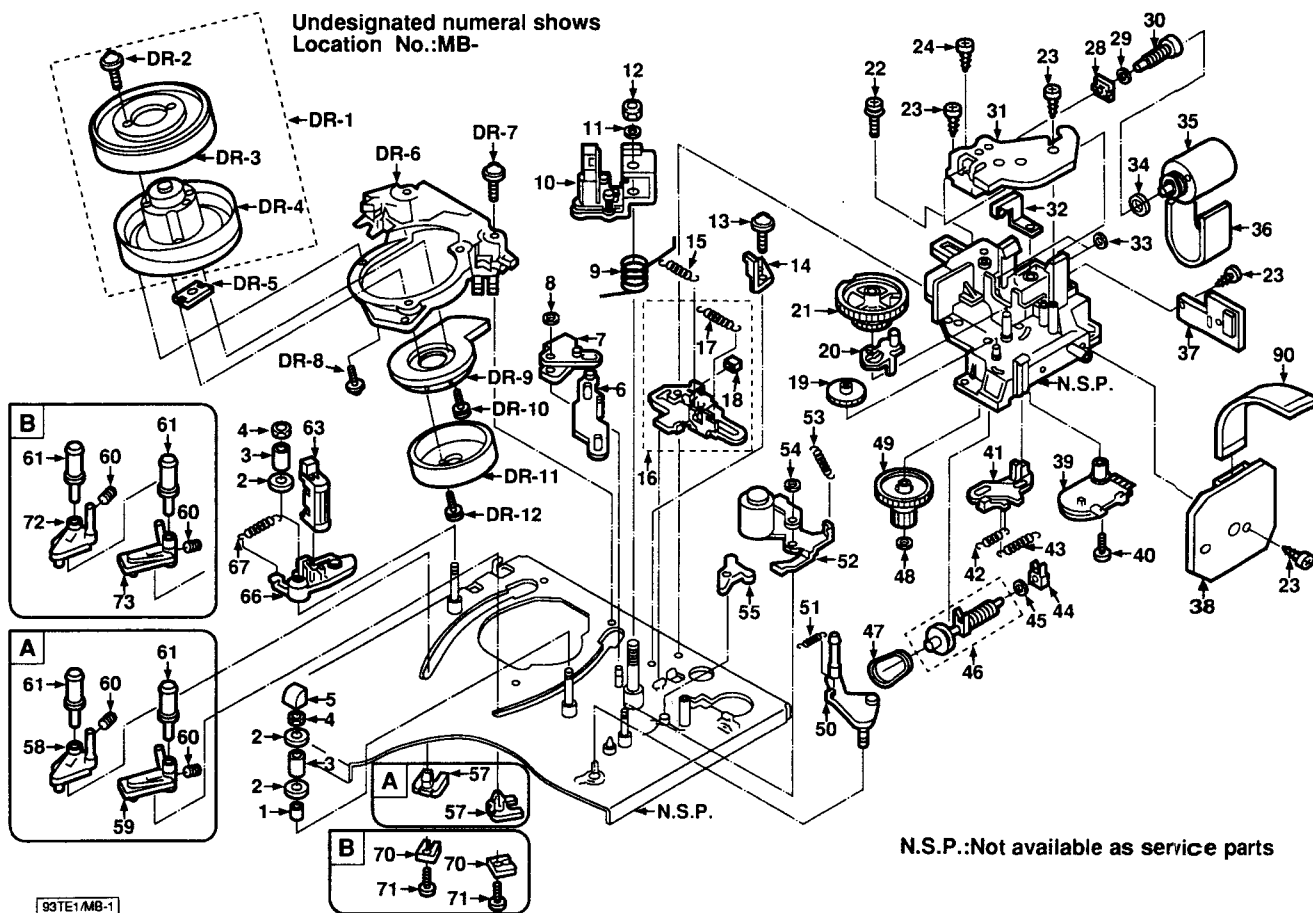
NOTE-M1

MB-57	8318 6040	PLATE,BGR
MB-58	8681 5264	ASSY,MOUNTING,ROLLER S
MB-59	8681 5265	ASSY,MOUNTING,ROLLER T
MB-60	6158 2020	SCR SET HEX-SCT 2X3
MB-61	8681 4132	ASSY,GUIDE,ROLLER
MB-63	4335 9466	HEAD,ERASE FULL
MB-66	8318 6041	LEVER,FE HEAD
MB-67	7358 4357	SPRING,ERASE HEAD
MB-70	8318 5338	PLATE,GUIDE
MB-71	6158 2022	SCR BIN 2.6X5
MB-72	8681 4130	ASSY,BASE,ROLLER S
MB-73	8681 4131	ASSY,BASE,ROLLER T
MB-90	4131 4293	FLEXIBLE FLAT CABLE SCN811-CN302

MECHANISM PARTS 3

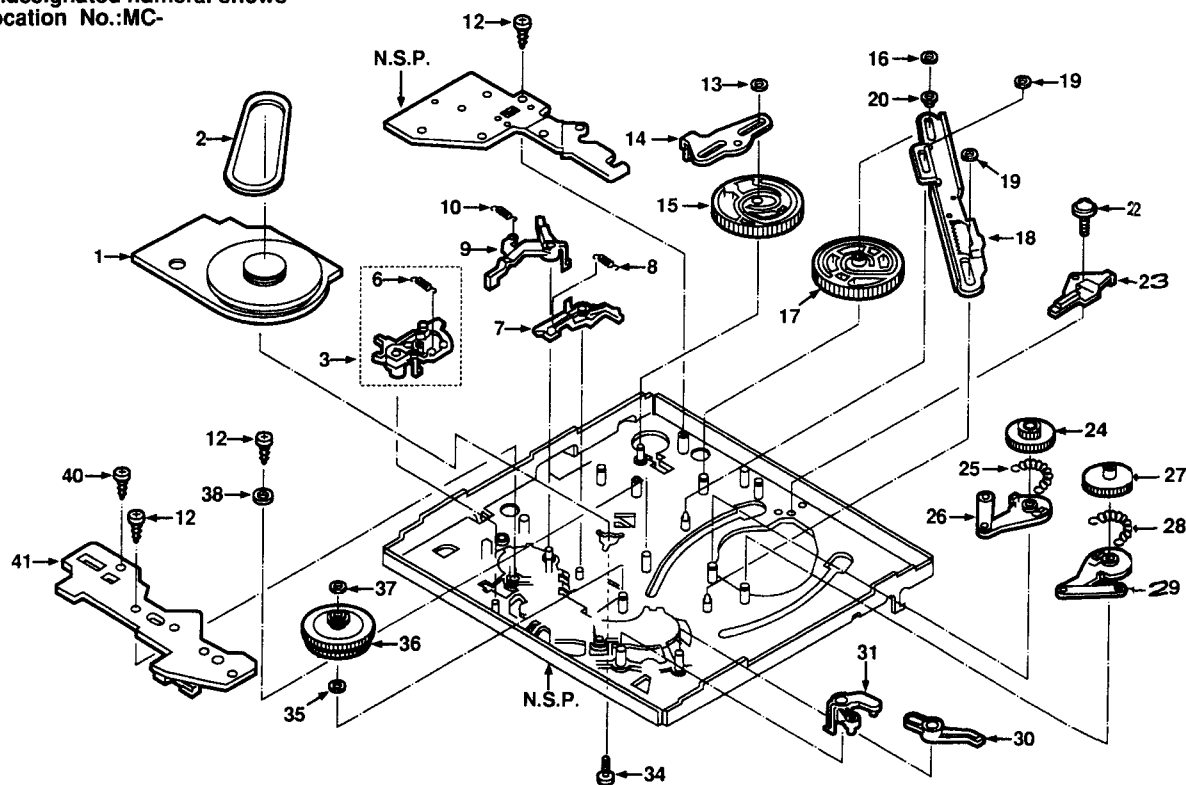
MC-1	4432 9389	MOTOR,CAPSTAN DC 3W
MC-2	7618 4268	BELT,REEL DRIVE
MC-3	8681 4971	COMPL,LEVER,CLUTCH
MC-6	7358 4359	SPRING,LEVER CLUTCH
MC-7	8681 4136	LEVER,CHANGE CLUTCH
MC-8	7358 4360	SPRING,CHANGE CLUTCH
MC-9	8681 4167	ASSY,BRAKE,CAPSTAN
MC-10	7358 4453	SPRING,CAPSTAN
MC-12		SCR S-TPG BIN 2.6X8
MC-13	6158 2016	WASHER Y 3.1X8X0.5
MC-14	8681 5263	SLIDE,CAM PLATE
MC-15	7525 1196	CAM,MODE
MC-16	6158 2017	WASHER Y 3.1X6X0.5
MC-17	7525 1350	CAM,MAIN
MC-18	8681 4976	ASSY,RACK,LOAD
MC-19	6158 2018	WASHER Y 2.6X6X0.5
MC-20	7726 0654	SPACER,RACK LOAD
MC-22		SCR PAN+FLG 3X4
MC-23	7358 4365	ASSY,EARTH,CYL
MC-24	7525 1351	GEAR,LOAD TAKE UP
MC-25	7358 4361	SPRING,GEAR LOAD T
MC-26	8681 4141	ASSY,LEVER,LOAD T
MC-27	7525 1199	GEAR,LOAD S
MC-28	7358 4362	SPRING,GEAR LOAD S
MC-29	8681 4142	ASSY,LEVER,LOAD S
MC-30	8681 4143	LEVER,RETURN TENSION
MC-31	8681 4387	ASSY,LEVER CONTROL
MC-34		SCR S-TPG PAN 2.6X6
MC-35	7726 0621	SPECIAL WASHER 3.1X6X0.25
MC-36	7525 1396	ASSY,GEAR,FRICTION
MC-37		SPECIAL WASHER 2.4X6X0.25
MC-38		WASHER Z 2.6X10X0.5
MC-40		SCR S-TPG BIN 2.6X5
MC-41	6913 1133	COMPL,MC-1

EXPLODED VIEW OF MECHANISM PARTS 2



EXPLODED VIEW OF MECHANISM PARTS 3

Undesignated numeral shows Location No.:MC-



ELECTRICAL PARTS

NOTE-2

NOTE;

1. Materials of Capacitors and Resistors are abbreviated as follows;

Resistors

MT-FILM Metallized Film Resistor
MT-GLAZE Metallized Glaze Resistor
OXIDE-MT Oxide Metallized film Resistor

Capacitors

MT-POLYEST Metallized Polyester capacitor
MT-COMPO Metallized Composite capacitor

2. Tolerance of Capacitor (10pF over) and Resistor are noted with follow symbols.

F ± 1% G ± 2% J ± 5% K ± 10%
M ± 20% N ± 30% Z ± 80% ~ -20%

3. Capacitors

U: µH P: pF

4. Inductors

UH: µH MH: mH

5. N.S.P.; Not available as service parts.

TA-SOLID Tantalum Solid Capacitor
AL-SOLID Aluminium Solid Capacitor
NP-ELECT Non-Polarized Electrolytic Capacitor
OS-SOLID Aluminium Solid Capacitors with Organic Semiconductive Electrolytic Capacitor
DL-ELECT Double Layered Electrolytic Capacitor

LOCATION	PARTS NO.	DESCRIPTION	LOCATION	PARTS NO.	DESCRIPTION
COMPL PWB,CP-1-A			Q3504	3614 4377	TR DTC144EL-TL2
COMPL.NO.6913 6668 (VCR 3704VPS ONLY)			OR		TR UN6213-(TA)
COMPL.NO.6913 6667 (VCR 3704 ONLY)					
COMPL.NO.6913 6690 (VCR 3704EE ONLY)			Q5101	3614 4942	TR 2SA608-E-SPA-AC
(SEMICONDUCTORS)			OR	3614 5281	TR 2SA608-F-SPA-AC
Q1002	3614 4379	TR 2SC4038-Q-TL2	Q5102	3614 4694	TR 2SC4483-S-AN
OR	3614 4378	TR 2SC4038-R-TL2	OR	3614 8824	TR 2SD1994-R (TA)
OR		TR 2SD1991A-Q-(TA)	OR	3614 7686	TR 2SD1994-S (TA)
OR		TR 2SD1991A-R-(TA)	Q5103	3614 5231	TR DTC114ES-DCTP
Q1003	3614 4614	TR 2SA1561-TL2-Q	OR	3614 5218	TR 2SC3402-AC
OR	3614 4492	TR 2SA1561-TL2-R			
OR		TR 2SB1320A-Q-(TA)	Q6001		TR 2SK1104-(TA) P
OR		TR 2SB1320A-R-(TA)	OR		TR 2SK1104-(TA) Q
Q1004	3614 4614	TR 2SA1561-TL2-Q	OR		TR 2SK1104-(TA) R
OR	3614 4492	TR 2SA1561-TL2-R	OR	3614 7523	TR 2SK222-D-AA
OR		TR 2SB1320A-Q-(TA)	OR		TR 2SK222-E-AA
OR		TR 2SB1320A-R-(TA)	OR		TR 2SK772-E-AC
Q1006	3614 4379	TR 2SC4038-Q-TL2	OR		TR 2SK772-F-AC
OR	3614 4378	TR 2SC4038-R-TL2	Q6002	3614 5227	TR DTC144ES-DCTP
OR		TR 2SD1991A-Q-(TA)	OR	3614 5279	TR 2SC3399-AC
OR		TR 2SD1991A-R-(TA)	Q6004	3614 7685	TR 2SC3901-AC
Q1011	3614 4377	TR DTC144EL-TL2	Q6005	3614 4494	TR DTA144ES-DCTP
OR		TR UN6213-(TA)	OR	3614 5280	TR 2SA1345-AC
Q1012	3614 4379	TR 2SC4038-Q-TL2	Q6601	3614 5227	TR DTC144ES-DCTP
OR	3614 4378	TR 2SC4038-R-TL2	OR	3614 5279	TR 2SC3399-AC
OR		TR 2SD1991A-Q-(TA)	Q6901	3614 4691	TR KSC2785-Y
OR		TR 2SD1991A-R-(TA)	OR	3614 3781	TR 2SC1740S-DCTP-Q
Q1014	3614 4379	TR 2SC4038-Q-TL2	OR	3614 5240	TR 2SC1740S-DCTP-R
OR	3614 4378	TR 2SC4038-R-TL2	OR	3614 4947	TR 2SC536-E-SPA-AC
OR		TR 2SD1991A-Q-(TA)	OR	3614 3969	TR 2SC536-F-SPA-AC
OR		TR 2SD1991A-R-(TA)	Q6902	3614 4690	TR KSA1175-Y
Q1151	3614 4377	TR DTC144EL-TL2	OR	3614 4942	TR 2SA608-E-SPA-AC
OR		TR UN6213-(TA)	OR	3614 5281	TR 2SA608-F-SPA-AC
Q1152	3614 4647	TR DTA124EL-TL2	OR	3614 4542	TR 2SA933S-TP-Q
Q1601	3614 5281	TR 2SA608-F-SPA-AC	OR	3614 5540	TR 2SA933S-T93-R
OR	3614 5540	TR 2SA933S-T93-R	Q6903	3614 4691	TR KSC2785-Y
Q1651	3614 5506	TR 2SA1348-AC	OR	3614 3781	TR 2SC1740S-DCTP-Q
Q1652	3614 4377	TR DTC144EL-TL2	OR	3614 5240	TR 2SC1740S-DCTP-R
OR		TR UN6213-(TA)	OR	3614 4947	TR 2SC536-E-SPA-AC
Q1721	3614 4463	TR 2SC2058S-DCTP-Q(VCR 3704EE ONLY)	OR	3614 3969	TR 2SC536-F-SPA-AC
OR	3614 4306	TR 2SC2839-E-SPA-AC (VCR 3704EE ONLY)	Q6904	3614 5227	TR DTC144ES-DCTP
OR	3614 4436	TR 2SC2839-F-SPA-AC (VCR 3704EE ONLY)	OR	3614 5279	TR 2SC3399-AC
			Q6921	3614 4546	TR 2SC2960-F-SPA-AC
			OR	3614 4547	TR 2SC2960-G-SPA-AC
(INTEGRATED CIRCUITS)					
Q2001	3614 7705	TR 2SC3331-S-AA	IC101	3771 6752	IC LA7345M
OR	3614 7731	TR 2SC3331-T-AA	IC111	3771 6749	IC LC89925
OR	3614 4650	TR 2SC3331-U-AA	IC161	3771 4675	IC BA7021
Q2002	3614 4377	TR DTC144EL-TL2	OR	3771 5789	IC LA7221
Q2003	3614 7730	TR DTA124ES-DCTP	IC171	3771 5021	IC BA7025L(VCR 3704EE ONLY)
OR	3614 4307	TR 2SA1346-AC			
Q3001	3614 4648	TR DTC114EL-TL2	IC201	3771 6759	IC LA7285M
OR		TR UN6211-(TA)			
Q3002	3614 4648	TR DTC114EL-TL2	IC301	3771 6772	IC LC866124V-5396
OR		TR UN6211-(TA)	IC302	3771 5425	IC LB1641
			IC303	3771 5499	IC MN1280-R

LOCATION	PARTS NO.	DESCRIPTION	LOCATION	PARTS NO.	DESCRIPTION
IC303	3771 6777	IC MN1380-R	D5105	3656 3080	DIODE ERA38-04-V5
OR	3771 6771	IC MN1381-R(TA)	D5109	3656 3455	ZENER DIODE MTZJ4.7B-T-77
IC351		IC BU2890BK	D5110	3656 3368	DIODE AK04-V2
OR	3771 6761	IC BU2890DK	D5111	3656 2770	DIODE GMA01-BT
OR	3771 6755	IC XRU2890BK	OR	3656 2230	DIODE 1SS133-T-77
IC501	3771 6760	IC STR-M6549	D5112	3656 8811	ZENER DIODE MTZJ5.1C-T-77
IC511	3771 5863	IC L5431-AA	D5113	3656 3055	DIODE DSK10C-BT
IC512	3771 6750	IC PQ12SZ11	OR	3656 3056	DIODE ERA15-02-V5
IC602	3771 6770	IC LE24C01S1	D5114	3656 3131	DIODE 1SS244-T-77
OR	3771 6586	IC ST24C01B1	D6901	3656 2770	DIODE GMA01-BT
OR	3771 6588	IC ST24C02AB1	OR	3656 2230	DIODE 1SS133-T-77
OR		IC X24C01AP-C7284	D6902	3656 2770	DIODE GMA01-BT
OR		IC X24C02P-C7189	OR	3656 2230	DIODE 1SS133-T-77
IC691	3771 4684	IC LA7910	D6903	3656 2770	DIODE GMA01-BT
IC692	3771 5050	IC L5631	OR	3656 2230	DIODE 1SS133-T-77
OR	3771 4088	IC UPC574J			
(DIODES)			(CRYSTAL DEVICES)		
D1003	3656 2770	DIODE GMA01-BT	X1001	4421 2238	OSC.CRYSTAL 4.433619MHZ
OR	3656 2230	DIODE 1SS133-T-77	OR		OSC.CRYSTAL 4.433619MHZ
D1006	3656 2770	DIODE GMA01-BT	X3001	4421 2249	OSC.CERAMIC 13.31MHZ
OR	3656 2230	DIODE 1SS133-T-77	OR		OSC.CERAMIC 13.31MHZ
D1007	3656 2770	DIODE GMA01-BT	X3002	4421 2348	OSC.CRYSTAL 32KHZ
OR	3656 2230	DIODE 1SS133-T-77	OR		OSC.CRYSTAL 32.768KHZ
D1008	3656 2770	DIODE GMA01-BT			
OR	3656 2230	DIODE 1SS133-T-77	(CERAMIC RESONATORS)		
D1201	3656 2770	DIODE GMA01-BT(VCR 3704EE ONLY)	XF171	4552 7270	FILTER 4.16MHZ B.F(VCR 3704EE ONLY)
OR	3656 2230	DIODE 1SS133-T-77(VCR 3704EE ONLY)	XF172	4543 3436	CHOKE COIL(VCR 3704EE ONLY)
D1601	3656 2770	DIODE GMA01-BT			
OR	3656 2230	DIODE 1SS133-T-77	(VARIABLE RESISTORS)		
D1602	3656 2770	DIODE GMA01-BT	VR101		VR,SEMI 22KB
OR	3656 2230	DIODE 1SS133-T-77	OR		VR,SEMI 22KB
D1612	3656 2770	DIODE GMA01-BT	VR102	3112 9897	VR,SEMI 2.2KB
OR	3656 2230	DIODE 1SS133-T-77	OR		VR,SEMI 2.2KB
D1613	3656 2770	DIODE GMA01-BT	VR103		VR,SEMI 22KB
OR	3656 2230	DIODE 1SS133-T-77	OR		VR,SEMI 22KB
D1651	3656 2770	DIODE GMA01-BT	VR104		VR,SEMI 22KB
OR	3656 2230	DIODE 1SS133-T-77	OR		VR,SEMI 22KB
D1652	3656 2770	DIODE GMA01-BT	VR201	3111 8726	SEMI VR 100KB
OR	3656 2230	DIODE 1SS133-T-77	OR		VR,SEMI 100KB
D3001	3656 3573	DIODE RB441Q T-77	VR351	3111 8728	SEMI VR 220KB
D3002	3656 3237	ZENER DIODE GZS5.6Y-BT	OR		VR,SEMI 220KB
OR	3656 3130	ZENER DIODE MTZJ5.6B-T-77			
D3003	3656 3238	ZENER DIODE GZS8.2Y-BT	(INDUCTORS)		
OR	3656 3129	ZENER DIODE MTZJ8.2B-T-77	L1002	4543 2197	COIL,INDUCTOR 1.0UHM
D3005	3656 2770	DIODE GMA01-BT			(VCR 3704VPS ONLY)
OR	3656 2230	DIODE 1SS133-T-77	OR	4543 3478	HF CHOKE 1.0UHK(VCR 3704VPS ONLY)
D3106	3656 2770	DIODE GMA01-BT	L1004	4543 8727	COIL,INDUCTOR 150UHK
OR	3656 2230	DIODE 1SS133-T-77	OR		HF CHOKE 150UHK
D3121	3656 2770	DIODE GMA01-BT	L1005	4543 8727	COIL,INDUCTOR 150UHK
OR	3656 2230	DIODE 1SS133-T-77	OR		HF CHOKE 150UHK
D3122	3656 2770	DIODE GMA01-BT	L1007	4543 2230	COIL,INDUCTOR 18UHK
OR	3656 2230	DIODE 1SS133-T-77	OR		HF CHOKE 18UHK
D3123	3656 2770	DIODE GMA01-BT	L1008	4543 3252	COIL,INDUCTOR 15UHK
OR	3656 2230	DIODE 1SS133-T-77	OR		HF CHOKE 15UHK
D3124	3656 2770	DIODE GMA01-BT	L1009	4543 3242	COIL,INDUCTOR 2.2UHM
OR	3656 2230	DIODE 1SS133-T-77			(VCR 3704VPS ONLY)
D3125	3656 2770	DIODE GMA01-BT	OR		HF CHOKE 2.2UHK(VCR 3704VPS ONLY)
OR	3656 2230	DIODE 1SS133-T-77	L1010	4543 8728	COIL,INDUCTOR 27UHK
D3128	3656 2770	DIODE GMA01-BT	OR		HF CHOKE 27UHK
OR	3656 2230	DIODE 1SS133-T-77	L1012	4543 3409	COIL,INDUCTOR 39UHK
			OR	4543 3236	HF CHOKE 39UHK
D3502	3656 2770	DIODE GMA01-BT	L1013	4543 8725	COIL,INDUCTOR 33UHK
OR	3656 2230	DIODE 1SS133-T-77	OR		HF CHOKE 33UHK
D5001	3656 3652	DIODE DBC10G	L1101	4543 3337	COIL,INDUCTOR 220UHK
D5003	3656 3178	DIODE AP01C-V0	OR		HF CHOKE 220UHK
D5004	3656 3131	DIODE 1SS244-T-77	L2002	4543 3871	HF CHOKE 10000UHK
D5011	3681 1830	PHOTO COUPLE PC120FB	L2003	4543 3929	COIL,INDUCTOR 560UHK
D5101	3656 3331	DIODE RL2Z-LF-B1	L2051	4543 2195	CORE(VCR 3704VPS ONLY)
D5102	3656 3653	DIODE ERC30-02L38	OR		FERRITE CORE(VCR 3704VPS ONLY)
D5103	3656 3181	DIODE AG01-V2	L3001	4552 6844	LINE FILTER
OR	3656 3080	DIODE ERA38-04-V5	L3002	4552 6844	LINE FILTER
D5104	3656 3131	DIODE 1SS244-T-77	L3100	4654 1550	CORE
D5105	3656 3181	DIODE AG01-V2			

LOCATION	PARTS NO.	DESCRIPTION
L5001	△ 4543 3935	COIL,LINE FILTER(VCR 3704VPS ONLY)
OR	△ 4543 3439	LF CHOKE 1MH 1A 250V (VCR 3704VPS ONLY)
L5002	△ 4552 6978	COIL,LINE FILTER
OR	△	LINE FILTER
L5004	4543 4008	FERRITE CORE
L5101	4543 3724	COIL,INDUCTOR 10UH K
OR		INDUCTOR 10U K
L5102	4543 4009	COIL,INDUCTOR 22UH K
OR		INDUCTOR 22U K
L6002	4543 4008	FERRITE CORE
L6006	4543 1989	COIL,INDUCTOR 10UHK
OR		HF CHOKE 10UHK
L6008	4543 1989	COIL,INDUCTOR 10UHK
OR		HF CHOKE 10UHK
L6009	4543 2256	COIL,INDUCTOR 10UHJ
L6602	4543 1989	COIL,INDUCTOR 10UHK
OR		HF CHOKE 10UHK
(TRANSFORMERS)		
T2001	3614 7739	TRANS,OSC 70KHZ
OR	4552 6840	70KHZ OSC TRANS
T5001	△ 4511 3517	TRANS,POWER,PULSE
T6901	4552 7548	TRANS,IF(EXCEPT VCR 3704EE)
OR	4552 7568	TRANS,IF(EXCEPT VCR 3704EE)
(DELAY LINES)		
DL101	4342 1036	DELAY LINE(COMB)
OR		DELAY LINE(COMB)
(CAPACITORS)		
C1001	CERAMIC	47P J 50V
C1002	CERAMIC	220P J 50V
C1003	CERAMIC	100P J 50V
C1005	ELECT	0.47U M 50V
C1006	CERAMIC	4.7P K 50V
C1007	CERAMIC	390P J 50V
C1010	CERAMIC	82P J 50V
C1011	ELECT	1U M 50V
C1012	ELECT	10U M 16V
C1013	ELECT	0.47U M 50V
C1014	CERAMIC	0.01U M 16V
C1015	CERAMIC	0.022U M 16V
C1016	CERAMIC	0.01U M 16V
C1021	CERAMIC	330P J 50V
C1022	CERAMIC	0.1U J 16V
C1023	CERAMIC	68P J 50V
C1028	CERAMIC	0.01U M 16V
C1030	ELECT	1U M 50V
C1031	ELECT	1U M 50V
C1032	CERAMIC	0.047U M 16V
C1033	CERAMIC	0.01U M 16V
C1036	ELECT	1U M 50V
C1037	ELECT	2.2U M 50V
C1038	CERAMIC	0.022U M 16V
C1039	CERAMIC	0.047U M 16V
C1040	CERAMIC	0.01U M 16V
C1041	ELECT	10U M 16V
C1044	ELECT	220U M 6.3V
C1046	ELECT	10U M 16V
C1047	ELECT	10U M 16V
C1048	CERAMIC	0.01U M 16V
C1049	CERAMIC	33P J 50V
C1051	CERAMIC	470P J 50V (VCR 3704VPS ONLY)
C1052	CERAMIC	0.01U M 16V (VCR 3704VPS ONLY)
C1053	CERAMIC	0.01U M 16V
C1058	CERAMIC	27P J 50V
C1060	CERAMIC	33P J 50V
C1061	CERAMIC	43P J 50V
C1062	CERAMIC	180P J 50V
C1063	CERAMIC	0.047U Z 16V
C1081	CERAMIC	82P J 50V
C1099	CERAMIC	0.1U Z 50V
C1101	ELECT	47U M 6.3V

LOCATION	PARTS NO.	DESCRIPTION
C1102	CERAMIC	0.01U M 16V
C1105	CERAMIC	12P J 50V
C1109	CERAMIC	0.01U M 16V
C1110	ELECT	1U M 50V
C1602	ELECT	470U M 6.3V
C1603	CERAMIC	0.1U Z 50V
C1611	ELECT	0.47U M 50V
C1612	CERAMIC	47P J 50V (VCR 3704VPS ONLY)
C1613	CERAMIC	0.047U Z 16V
C1614	ELECT	10U M 16V
C1721	CERAMIC	0.01U M 16V (VCR 3704EE ONLY)
C1722	CERAMIC	100P J 50V (VCR 3704EE ONLY)
C1723	ELECT	10U M 16V (VCR 3704EE ONLY)
C1725	ELECT	10U M 16V (VCR 3704EE ONLY)
C1727	CERAMIC	0.01U M 16V (VCR 3704EE ONLY)
C2002	CERAMIC	820P K 50V
C2004	ELECT	33U M 6.3V
C2005	CERAMIC	0.018U K 16V
C2009	ELECT	22U M 10V
C2010	ELECT	47U M 16V
C2013	CERAMIC	0.015U J 25V
C2016	ELECT	4.7U M 25V
C2017	ELECT	10U M 16V
C2019	ELECT	47U M 16V
C2020	CERAMIC	220P K 50V
C2021	POLYPRO	6800P J 100V
C2022	CERAMIC	0.01U K 16V
C2024	CERAMIC	0.01U K 16V
C2051	CERAMIC	120P K 50V (VCR 3704VPS ONLY)
C2091	CERAMIC	0.1U Z 50V
C2092	CERAMIC	2200P M 16V
C2101	CERAMIC	0.1U Z 50V
C2102	CERAMIC	0.1U Z 50V
C2152	CERAMIC	1000P K 50V
C2153	CERAMIC	6800P M 16V
C3001	ELECT	2.2U M 50V
C3002	CERAMIC	0.01U M 16V
C3003	CERAMIC	0.1U Z 25V
C3004	CERAMIC	0.01U M 16V
C3005	CERAMIC	0.01U M 16V
C3008	ELECT	10U M 16V
C3009	CERAMIC	0.01U M 16V
C3010	CERAMIC	22P J 50V
C3011	CERAMIC	20P J 50V
C3012	CERAMIC	0.01U M 16V
C3016	CERAMIC	0.01U M 16V
C3017	CERAMIC	1000P K 50V
C3018	ELECT	330U M 6.3V
C3020	CERAMIC	0.1U Z 50V
C3021	CERAMIC	0.1U Z 50V
C3030	CERAMIC	0.1U Z 50V
C3200	CERAMIC	2200P M 16V
C3501	CERAMIC	0.015U K 16V
C3502	CERAMIC	6800P K 16V
C3503	CERAMIC	0.015U K 16V
C3505	ELECT	22U M 16V
C3506	CERAMIC	6800P K 16V
C3508	ELECT	22U M 10V
C3511	CERAMIC	220P K 50V
C3512	MT-POLYEST	0.039U J 50V
C3513	CERAMIC	0.068U K 16V
C3514	POLYESTER	0.1U K 50V
C3515	POLYESTER	0.022U K 50V
C3516	CERAMIC	2200P K 16V
C3517	CERAMIC	1500P K 16V
C3522	CERAMIC	1000P K 50V
C3523	ELECT	1U M 50V
C3524	CERAMIC	0.01U M 16V
C3525	ELECT	0.47U M 50V

LOCATION	PARTS NO.	DESCRIPTION	LOCATION	PARTS NO.	DESCRIPTION
C3526		CERAMIC 0.022U K 16V	R1012		CARBON 1K JA 1/4W
C3530		ELECT 47U M 6.3V	R1013		CARBON 1K JA 1/4W
C3536		ELECT 220U M 6.3V	R1014		CARBON 2.2K JA 1/4W
C3540		CERAMIC 100P K 50V	R1019		CARBON 22K JA 1/4W
C3551		MT-POLYEST 0.12U J 50V	R1020		CARBON 12K JA 1/4W
C3552		CERAMIC 56P J 50V	R1021		CARBON 1K JA 1/4W
C3553		ELECT 1U M 50V	R1022		CARBON 390 JA 1/4W
C3554		CERAMIC 150P J 50V	R1024		CARBON 1K JA 1/4W
C3556		CERAMIC 1000P K 50V	R1026		CARBON 1M JA 1/4W
C3558		ELECT 33U M 16V	R1027		CARBON 8.2K JA 1/4W
C3571		CERAMIC 0.1U Z 50V	R1028		CARBON 1.8K JA 1/4W
C3599		CERAMIC 0.1U Z 50V	R1029		CARBON 1K JA 1/4W
C5001	Δ 3261 9057	MT-POLYEST 0.22U M 250V	R1032		CARBON 22K JA 1/4W
C5002	Δ 3261 9056	MT-POLYEST 0.068U M 250V	R1033		CARBON 1K JA 1/4W
C5003	3422 0154	ELECT 47U M 400V	R1035		CARBON 470 JA 1/4W
C5004	3422 0155	ELECT 2.2U M 250V	R1036		CARBON 1.5K JA 1/4W
C5005	3261 9052	CERAMIC 39P J 1K	R1040		CARBON 150 JA 1/4W
C5006		ELECT 10U M 35V	R1043		CARBON 2.2K JA 1/4W
C5020	Δ 3422 0156	CERAMIC 1000P M 400V	R1044		CARBON 12K JA 1/4W
C5022	Δ 3422 0156	CERAMIC 1000P M 400V	R1046		CARBON 33K JA 1/4W
C5101		ELECT 1000U M 16V	R1049		CARBON 12K JA 1/4W
C5102	3422 0809	ELECT 470U M 16V	R1052		CARBON 1K JA 1/4W
C5104		ELECT 1000U M 10V	R1053		CARBON 330 JA 1/4W
C5105		ELECT 470U M 6.3V	R1054		CARBON 3.3K JA 1/4W
C5106		ELECT 47U M 50V	R1059		CARBON 1.8K JA 1/4W
C5107		ELECT 47U M 25V	R1063		CARBON 22K JA 1/4W
C5108		ELECT 220U M 6.3V	R1071		CARBON 2.7K JA 1/4W
C5110		MT-POLYEST 0.047U J 50V	R1072		CARBON 1.8K JA 1/4W
C5112		ELECT 100U M 16V	R1105		CARBON 3.9K JA 1/4W
C5113		CERAMIC 0.01U M 16V	R1106		CARBON 6.8K JA 1/4W
C5114		ELECT 47U M 6.3V	R1601		CARBON 110 JA 1/4W
C6001		ELECT 4.7U M 50V	R1602		CARBON 75 JA 1/4W
C6003		ELECT 2.2U M 50V	R1604		CARBON 120 JA 1/4W
C6004		MT-POLYEST 0.1U J 50V	R1605		CARBON 330 JA 1/4W
C6005		CERAMIC 0.1U Z 50V	R1606		CARBON 390 JA 1/4W
C6007		ELECT 10U M 16V	R1615		CARBON 75 JA 1/4W
C6008		CERAMIC 0.033U Z 16V	R1651		CARBON 10K JA 1/4W
C6009		ELECT 470U M 16V	R1652		CARBON 1K JA 1/4W
C6013		CERAMIC 2200P M 16V	R1655		CARBON 22K JA 1/4W
C6014		CERAMIC 2200P M 16V	R1656		CARBON 56 JA 1/4W
C6015		CERAMIC 2200P M 16V	R1721		CARBON 10K JA 1/4W
C6602		ELECT 470U M 6.3V			(VCR 3704EE ONLY)
C6901		ELECT 1U M 50V	R1722		CARBON 2.7K JA 1/4W
		(VCR 3704EE ONLY)			(VCR 3704EE ONLY)
C6902		CERAMIC 0.047U Z 16V	R1723		CARBON 1.2K JA 1/4W
		(EXCEPT VCR 3704EE)			(VCR 3704EE ONLY)
C6903		CERAMIC 0.01U M 16V	R1724		CARBON 1K JA 1/4W
		(VCR 3704EE ONLY)			(VCR 3704EE ONLY)
C6904		ELECT 10U M 16V	R1725		CARBON 22K JA 1/4W
		(EXCEPT VCR 3704EE)			(VCR 3704EE ONLY)
C6905		CERAMIC 56P J 50V	R1727		CARBON 150K JA 1/4W
		(VCR 3704EE ONLY)			(VCR 3704EE ONLY)
C6906		CERAMIC 0.022U Z 25V	R1728		CARBON 430 JA 1/4W
		(EXCEPT VCR 3704EE)			(VCR 3704EE ONLY)
C6907		ELECT 1U M 50V	R1729		CARBON 2.2K JA 1/4W
		(VCR 3704EE ONLY)			(VCR 3704EE ONLY)
OR		ELECT 0.22U M 50V	R1730		CARBON 22K JA 1/4W
		(EXCEPT VCR 3704EE)			(VCR 3704EE ONLY)
C6909		CERAMIC 0.1U Z 50V	R2001		CARBON 100 JA 1/4W
C6910		CERAMIC 1000P K 50V	R2002		CARBON 2.7K JA 1/4W
		(VCR 3704EE ONLY)	R2003		CARBON 51 JA 1/4W
C6922		ELECT 22U M 50V	R2004		CARBON 390K JA 1/4W
C6924		CERAMIC 180P K 50V	R2005		CARBON 6.2K JA 1/4W
C6925		MT-POLYEST 0.33U J 50V	R2009		CARBON 1M JA 1/4W
C6926		MT-POLYEST 0.22U J 50V	R2010		CARBON 10K JA 1/4W
			R2011		CARBON 15K JA 1/4W
			R2012		CARBON 33K JA 1/4W
			R2013		CARBON 6.8K JA 1/4W
			R2014		CARBON 1.2K JA 1/4W
			R2018		CARBON 22K JA 1/4W
			R2021		CARBON 3.3 JA 1/4W
			R2022		CARBON 47 JA 1/4W
			R2023		CARBON 15K JA 1/4W
			R2024		CARBON 6.8 JA 1/4W
			R2091		CARBON 2.7K JA 1/4W
			R2101		CARBON 39K JA 1/4W
			R2102		CARBON 27K JA 1/4W
			R2103		CARBON 39K JA 1/4W
(RESISTORS)					
R1001		CARBON 3.3K JA 1/4W			
R1002		CARBON 1K JA 1/4W			
R1003		CARBON 3.9K JA 1/4W			
R1004		CARBON 1K JA 1/4W			
R1005		CARBON 270 JA 1/4W			
R1006		CARBON 820 JA 1/4W			
R1007		CARBON 1K JA 1/4W			
R1008		CARBON 2.7K JA 1/4W			
R1009		CARBON 820 JA 1/4W			
R1011		CARBON 100K JA 1/4W			

LOCATION	PARTS NO.	DESCRIPTION
R2104		CARBON 22K JA 1/4W
R2105		CARBON 510 JA 1/4W
R2106		CARBON 820 JA 1/4W
R2107		CARBON 560 JA 1/4W
R2108		CARBON 2.7K JA 1/4W
R2109		CARBON 2.7K JA 1/4W
R2110		CARBON 1K JA 1/4W
R2111		CARBON 750 JA 1/4W
R3001	Δ 3151 7950	FUSIBLE RES 3.3 JA 1/2W
R3004		CARBON 1.5K JA 1/4W
R3006		CARBON 47K JA 1/4W
R3010		CARBON 10K JA 1/4W
R3011		CARBON 22K JA 1/4W
R3012		CARBON 4.7K JA 1/4W
R3013		CARBON 4.7K JA 1/4W
R3014		CARBON 200K JA 1/4W
R3015		CARBON 200K JA 1/4W
R3016		CARBON 4.7K JA 1/4W
R3017		CARBON 4.7K JA 1/4W
R3018		CARBON 10K JA 1/4W
R3019		CARBON 47K JA 1/4W
R3020		CARBON 10K JA 1/4W
R3025		CARBON 1K JA 1/4W
R3026		CARBON 1K JA 1/4W
R3027		CARBON 100K JA 1/4W
R3028		CARBON 100K JA 1/4W
R3029		CARBON 100K JA 1/4W
R3032		CARBON 33K JA 1/4W
R3034		CARBON 12K JA 1/4W
R3035		CARBON 10K JA 1/4W
R3036		CARBON 10K JA 1/4W
R3040		CARBON 750 JA 1/4W
R3061		CARBON 47K JA 1/4W
R3062		CARBON 33K JA 1/4W
R3063		CARBON 47K JA 1/4W
R3101		CARBON 100K JA 1/4W
R3102		CARBON 100K JA 1/4W
R3200		CARBON 100K JA 1/4W
R3201		CARBON 100K JA 1/4W
R3202		CARBON 100K JA 1/4W
R3203		CARBON 100K JA 1/4W
R3204		CARBON 100K JA 1/4W
R3205		CARBON 100K JA 1/4W
R3206		CARBON 100K JA 1/4W
R3207		CARBON 100K JA 1/4W
R3501		CARBON 100K JA 1/4W
R3502		CARBON 100K JA 1/4W
R3503		CARBON 330K JA 1/4W
R3504		CARBON 150K JA 1/4W
R3505		CARBON 15K JA 1/4W
R3506		CARBON 220K JA 1/4W
R3507		CARBON 150K JA 1/4W
R3508		CARBON 27K JA 1/4W
R3516		CARBON 10K JA 1/4W
R3517		CARBON 47K JA 1/4W
R3518		CARBON 47K JA 1/4W
R3520		CARBON 330K JA 1/4W
R3521		CARBON 10K JA 1/4W
R3525		CARBON 1K JA 1/4W
R3526		CARBON 2.2K JA 1/4W
R3527		CARBON 1K JA 1/4W
R3528		CARBON 510 JA 1/4W
R3529		CARBON 510 JA 1/4W
R3537		CARBON 8.2K JA 1/4W
R3546		CARBON 4.7K JA 1/4W
R3547		CARBON 15K JA 1/4W
R3549		CARBON 10K JA 1/4W
R3550		CARBON 12K JA 1/4W
R3556		CARBON 10K JA 1/4W
R3557		CARBON 330K JA 1/4W
R3558		CARBON 470 JA 1/4W
R5001	Δ 3151 7954	CARBON 2.7M KA 1/2W
R5003		OXIDE-MT 68K JA 2W
R5005		CARBON 680K JA 1/2W
R5006		CARBON 680K JA 1/2W
R5009		CARBON 10 JA 1/4W

LOCATION	PARTS NO.	DESCRIPTION
R5010	3151 7910	OXIDE-MT 0.47 JA 1W
R5105		MT-FILM 560 FD 1/4W
R5106		MT-FILM 620 FD 1/4W
R5107		CARBON 430 JA 1/4W
R5108		CARBON 1K JA 1/4W
R5109		CARBON 6.2K JA 1/4W
R5110		CARBON 2.2K JA 1/4W
R5111		CARBON 1K JA 1/4W
R5112		CARBON 12K JA 1/4W
R5113		CARBON 240 JA 1/4W
R5114		CARBON 240 JA 1/4W
R5115		MT-FILM 82 FD 1/4W
R5117		CARBON 240 JA 1/4W
R5118		CARBON 240 JA 1/4W
R5120	Δ 3151 7956	FUSIBLE RES 3.9 JA 1/4W
R6001		CARBON 390K JA 1/4W
R6002		CARBON 270K JA 1/4W
R6003		CARBON 390K JA 1/4W
R6004		CARBON 470K JA 1/4W
R6006		CARBON 3.3K JA 1/4W
R6008		CARBON 1M JA 1/4W
R6009		CARBON 4.7K JA 1/4W
R6901		CARBON 100 JA 1/4W
R6902		CARBON 1K JA 1/4W
R6903		CARBON 330 JA 1/4W
		(EXCEPT VCR 3704EE)
OR		CARBON 100K JA 1/4W
		(VCR 3704EE ONLY)
R6904		CARBON 10K JA 1/4W
		(EXCEPT VCR 3704EE)
R6905		CARBON 470 JA 1/4W
		(EXCEPT VCR 3704EE)
OR		CARBON 680 JA 1/4W
		(VCR 3704EE ONLY)
R6906		CARBON 330K JA 1/4W
		(EXCEPT VCR 3704EE)
OR		CARBON 390K JA 1/4W
		(VCR 3704EE ONLY)
R6907		CARBON 10K JA 1/4W
		(EXCEPT VCR 3704EE)
R6908		CARBON 82 JA 1/4W
		(EXCEPT VCR 3704EE)
R6909		CARBON 1K JA 1/4W
		(VCR 3704EE ONLY)
OR		CARBON 3.3K JA 1/4W
		(EXCEPT VCR 3704EE)
R6910		CARBON 1K JA 1/4W
		(EXCEPT VCR 3704EE)
OR		CARBON 27K JA 1/4W
		(VCR 3704EE ONLY)
R6911		CARBON 1K JA 1/4W
		(VCR 3704EE ONLY)
OR		CARBON 510 JA 1/4W
		(EXCEPT VCR 3704EE)
R6914		CARBON 5.6K JA 1/4W
R6915		CARBON 3.9K JA 1/4W
R6921		CARBON 33K JA 1/4W
R6922		CARBON 10K JA 1/4W
R6923		CARBON 10K JA 1/4W
R6924		CARBON 18K JA 1/4W
R6925		CARBON 15K JA 1/4W
R6926		CARBON 12K JA 1/4W
R6927		CARBON 120 JA 1/4W
		(EXCEPT VCR 3704EE)
R6928		CARBON 3.9K JA 1/4W
(SWITCHES)		
S3101		SW,PUSH,REC
OR	4112 7524	SWITCH,PUSH,REC
S3102		SW,PUSH,EJECT
OR	4112 7524	SWITCH,PUSH,EJECT
S3103		SW,PUSH,ASO+WIDE
OR	4112 7524	SWITCH,PUSH,ASO+WIDE
S3104		SW,PUSH,POWER
OR	4112 7524	SWITCH,PUSH,POWER
S3105		SW,PUSH,CH UP
OR	4112 7524	SWITCH,PUSH,CH UP
S3106		SW,PUSH,CH DOWN
OR	4112 7524	SWITCH,PUSH,CH DOWN

LOCATION	PARTS NO.	DESCRIPTION
S3107		SW,PUSH,REW
OR	4112 7524	SWITCH,PUSH,REW
S3108		SW,PUSH,PLAY
OR	4112 7524	SWITCH,PUSH,PLAY
S3109		SW,PUSH,FF
OR	4112 7524	SWITCH,PUSH,FF
S3110		SW,PUSH,STOP
OR	4112 7524	SWITCH,PUSH,STOP
S6601	4112 7538	SWITCH,SLIDE 1P-2T,TV SYSTEM (VCR 3704EE ONLY)
(FUSE)		
F5001	△ 4375 2124	FUSE 250V 2.5A
(PROTECTOR)		
PR511	△ 4375 2125	CIRCUIT PROTECTOR
(CONNECTORS)		
CN161	4144 8306	SOCKET,21P
CN501	△ 4144 8389	SOCKET,INLET AC
(MISCELLANEOUS)		
CN161	4131 4295	SOCKET,RGB 21P
OR		SOCKET,RGB 21P
	8681 4390	FIXER
	8681 4988	HOLDER,FUSE,F5001
COMPL PWB,VP-1		
COMPL.NO.6913 6666		
(SEMICONDUCTORS)		
Q1801	3614 4691	TR KSC2785-Y
OR	3614 3781	TR 2SC1740S-DCTP-Q
OR	3614 5240	TR 2SC1740S-DCTP-R
OR	3614 4947	TR 2SC536-E-SPA-AC
OR	3614 3969	TR 2SC536-F-SPA-AC
Q1851	3614 4463	TR 2SC2058S-DCTP-Q
OR	3614 4306	TR 2SC2839-E-SPA-AC
OR	3614 4436	TR 2SC2839-F-SPA-AC
Q1852	3614 4690	TR KSA1175-Y
OR	3614 4942	TR 2SA608-E-SPA-AC
OR	3614 5281	TR 2SA608-F-SPA-AC
OR	3614 4542	TR 2SA933S-TP-Q
OR	3614 5540	TR 2SA933S-T93-R
(INTEGRATED CIRCUITS)		
IC181	3771 6584	IC LA7377A
IC191	3771 6756	IC TEA5750
(DIODES)		
D1901	3656 3655	ZENER DIODE GZS3.9X-BT
OR		ZENER DIODE MTZJ3.9A-T-77
(VARIABLE RESISTORS)		
VR182	3111 8971	SEMI VR 2.2KB
OR	3112 9636	VR,SEMI 2.2KB
(INDUCTORS)		
L1801	4543 2199	COIL,INDUCTOR 100UHK
OR		HF CHOKE 100UHK
L1802	4543 3251	COIL,INDUCTOR 68UHK
OR		HF CHOKE 68UHK
L1851	4543 2199	COIL,INDUCTOR 100UHK
OR		HF CHOKE 100UHK
L1852	4543 3251	COIL,INDUCTOR 68UHK
OR		HF CHOKE 68UHK
L1901	4543 1949	COIL,INDUCTOR 47UHK
L1902	4543 1949	COIL,INDUCTOR 47UHK
L1903	4543 4007	COIL,INDUCTOR 120UHK
(CAPACITORS)		
C1801		OS-SOLID 4.7U M 10V
C1804		CERAMIC 0.01U M 16V
C1805		ELECT 0.33U M 50V

LOCATION	PARTS NO.	DESCRIPTION
C1807		CERAMIC 470P J 50V
C1808		CERAMIC 91P J 50V
C1809		CERAMIC 0.01U M 16V
C1810		CERAMIC 0.01U M 16V
C1811		CERAMIC 0.01U M 16V
C1812		CERAMIC 0.01U M 16V
C1813		CERAMIC 0.033U J 16V
C1814		CERAMIC 0.033U J 16V
C1851		CERAMIC 390P J 50V
C1852		CERAMIC 330P J 50V
C1853		CERAMIC 22P J 50V
C1856		CERAMIC 47P J 50V
C1857		CERAMIC 82P J 50V
C1901		CERAMIC 220P J 50V
C1902		CERAMIC 82P J 50V
C1903		CERAMIC 0.01U M 16V
C1904		CERAMIC 39P J 50V
C1905		CERAMIC 0.01U M 16V
C1906		CERAMIC 0.01U M 16V
C1907		CERAMIC 0.1U Z 50V
C1908		ELECT 47U M 6.3V
C1909		OS-SOLID 1U M 25V
(RESISTORS)		
R1801		CARBON 5.6K JA 1/4W
R1803		CARBON 10K JA 1/4W
R1805		CARBON 1.5K JA 1/4W
R1807		CARBON 1K JA 1/4W
R1808		CARBON 1.8K JA 1/4W
R1811		CARBON 4.3K JA 1/4W
R1813		CARBON 1K JA 1/4W
R1814		CARBON 22K JA 1/4W
R1815		CARBON 5.6K JA 1/4W
R1816		CARBON 1.2K JA 1/4W
R1851		CARBON 330 JA 1/4W
R1852		CARBON 22K JA 1/4W
R1853		CARBON 22K JA 1/4W
R1854		CARBON 390 JA 1/4W
R1855		CARBON 390 JA 1/4W
R1856		CARBON 2.2K JA 1/4W
R1862		CARBON 470 JA 1/4W
R1869		CARBON 1.8K JA 1/4W
R1901		CARBON 22K JA 1/4W
R1902		CARBON 27K JA 1/4W
R1903		CARBON 1K JA 1/4W
R1904		CARBON 100 JA 1/4W
R1905		CARBON 820 JA 1/4W
R1906		CARBON 2.7K JA 1/4W
R1907		CARBON 1M JA 1/4W
R1908		MT-FILM 1.2K FD 1/4W
R1909		MT-FILM 1.1K FD 1/4W
COMPL PWB,TM-1		
COMPL.NO.6913 6665		
(REMOTE RECEIVERS)		
RR701	6913 6685	IR RECEIVER PACK UNIT
OR		IR RECEIVER PACK UNIT
(DISPLAYS)		
A7001	3686 1164	FLUORESCENT TUBE
OR		FLUORESCENT TUBE
	8681 5261	HOLDER FL
COMPL PCB,TM-8		
COMPL.NO.6913 0957 (VCR 3704VPS ONLY)		
(INTEGRATED CIRCUIT)		
IC781	3771 5597	IC SDA5642
(CAPACITORS)		
C7802		CERAMIC 150P J 50V
C7803		MT-COMPO 0.33U J 50V
C7804		POLYESTER 0.1U J 50V
(RESISTORS)		
R7805		MT-GLAZE 2.2K JA 1/4W

LOCATION	PARTS NO.	DESCRIPTION
R7806		MT-GLAZE 1M JA 1/10W
R7807		MT-GLAZE 820K JA 1/10W
R7808		MT-GLAZE 100K JA 1/10W
R7809		MT-GLAZE 10K JA 1/10W
R7810		MT-GLAZE 1.2M JA 1/10W
R7811		MT-GLAZE 100 JA 1/10W
R7812		MT-GLAZE 5.6K JA 1/10W

COMPL,MC-1

COMPL.NO.6913 1133

(DIODE)

D8001	3683 1088	PHOTO COUPLE SPI-315-04-C
OR	3683 1102	PHOTO DIODE ON2170-R

(RESISTOR)

R8001		CARBON 270 JA 1/4W
OR		CARBON 270 JA 1/6W
R8002		CARBON 100 JA 1/4W
OR		CARBON 100 JA 1/6W

LOCATION	PARTS NO.	DESCRIPTION
(SWITCH)		
S8001	4112 9704	SPECIAL SWITCH
FLEXIBLE FLAT CABLE		
	4131 4293	FLEXIBLE FLAT CABLE,CN303-CN811
	4131 4296	FLEXIBLE FLAT CABLE,CN101-CN181
	4131 4297	FLEXIBLE FLAT CABLE,CN301-CN701

PB100711

VCR 3704 VPS

VCR 3704

VCR 3704 EE

BLOCK DIAGRAMS, CIRCUIT DIAGRAMS & PRINTED WIRING BOARDS

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NOTES:

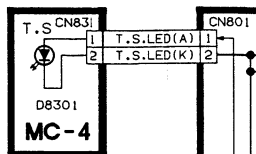
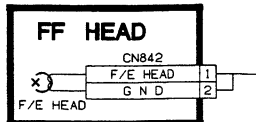
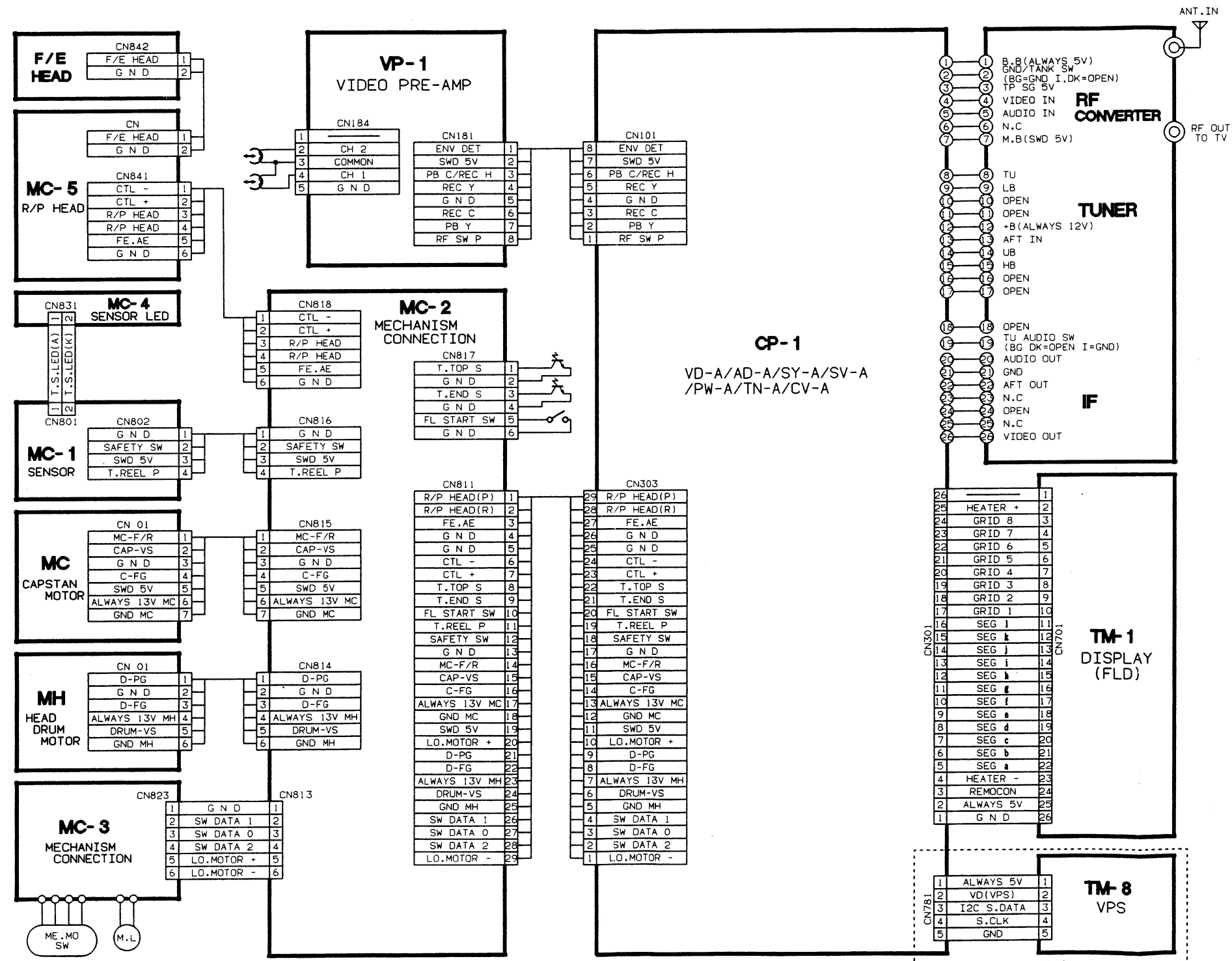
1. All resistance values in "OHMS" unless otherwise noted.
(K=1,000 M=1,000,000)
2. All capacitance values in "μfd" unless otherwise noted.
p=pico farad
3. All inductance values in "mH" unless otherwise noted.
μ=micro henry.

PRODUCT SAFETY NOTICE

THE COMPONENTS DESIGNATED BY A SYMBOL () IN THIS SCHEMATIC DIAGRAM DESIGNATES COMPONENTS WHOSE VALUE ARE OF SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. SHOULD ANY COMPONENT DESIGNATED BY A SYMBOL NEED TO BE REPLACED, USE ONLY THE PART DESIGNATED IN THE PARTS LIST. DO NOT DEVIATE FROM THE RESISTANCE, WATTAGE AND VOLTAGE RATINGS SHOWN.

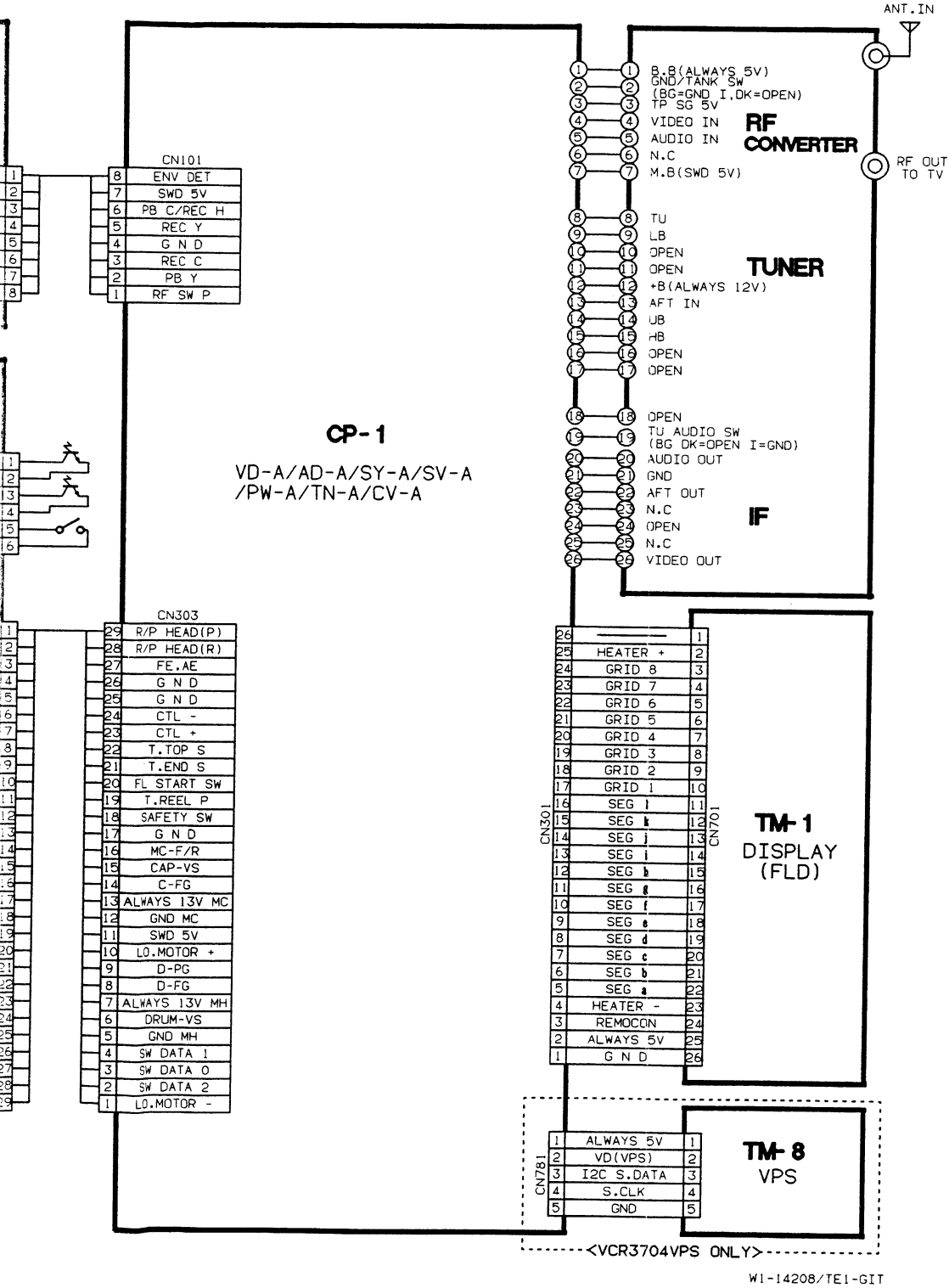
1. OVERALL WIRING, MECHANISM CONNECTION, & BLOCK DIAGRAMS

1-1. OVERALL WIRING

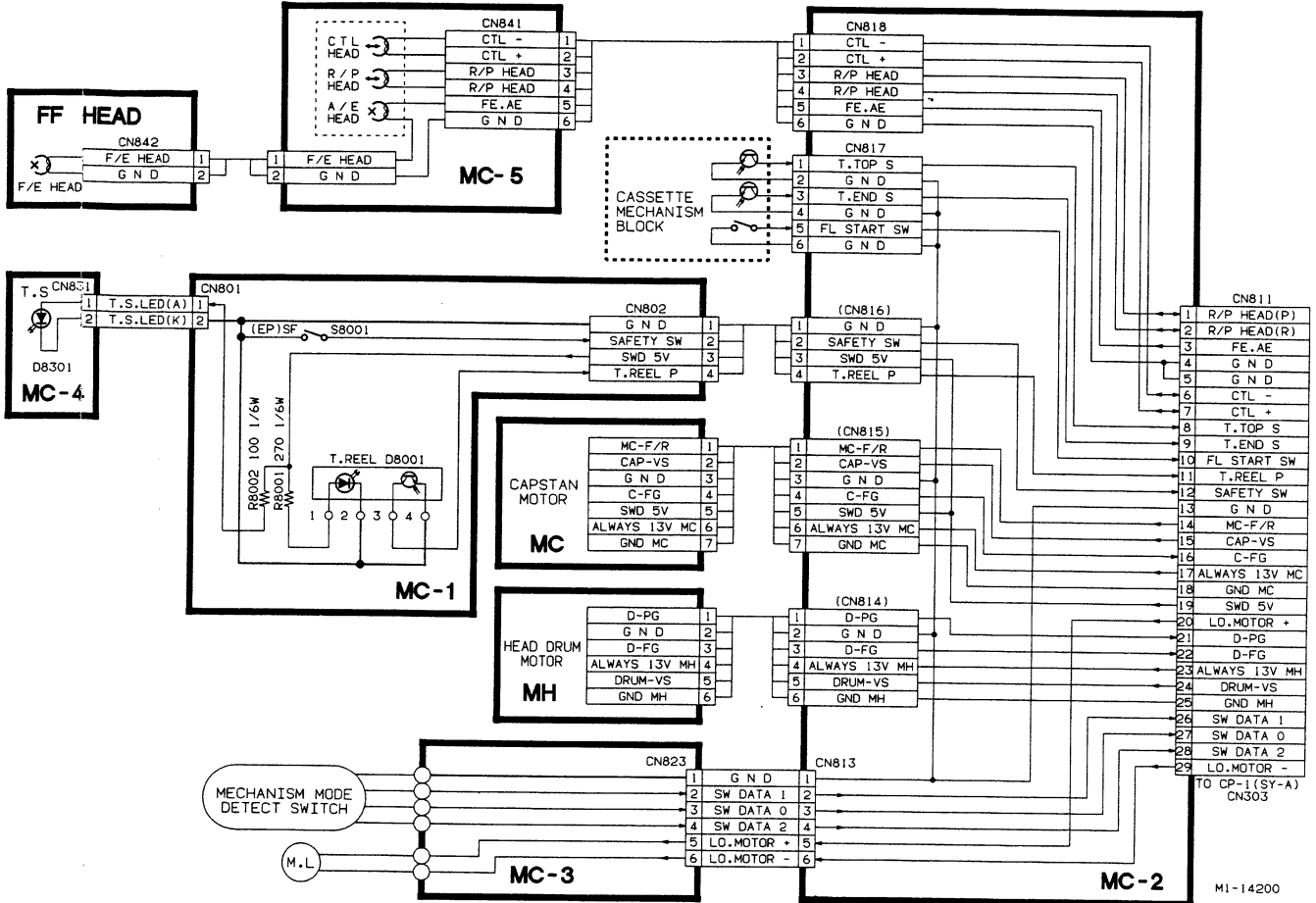


WI-14208/TE1-GIT

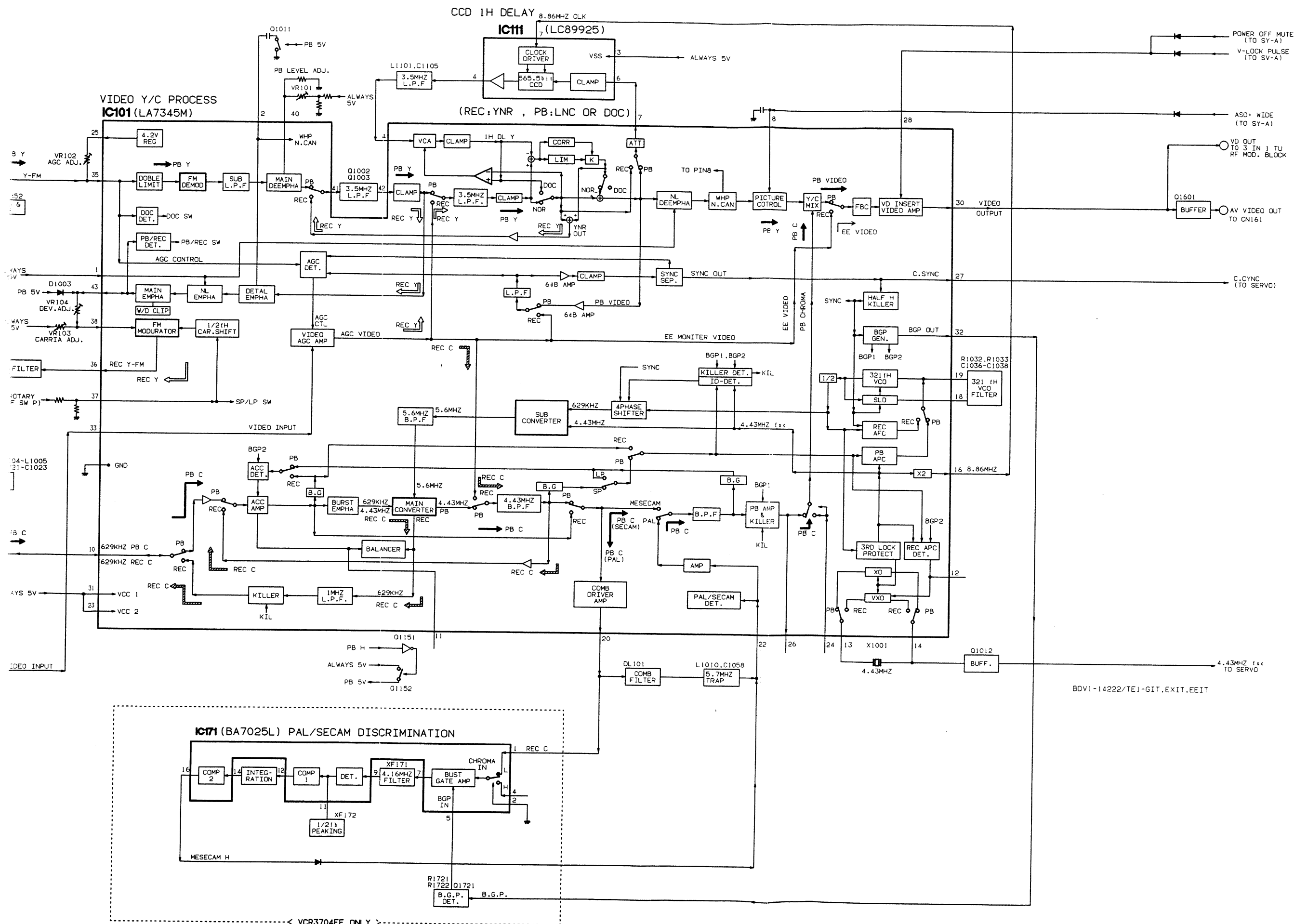
1-1. OVERALL WIRING



1-2. MECHANISM CONNECTION

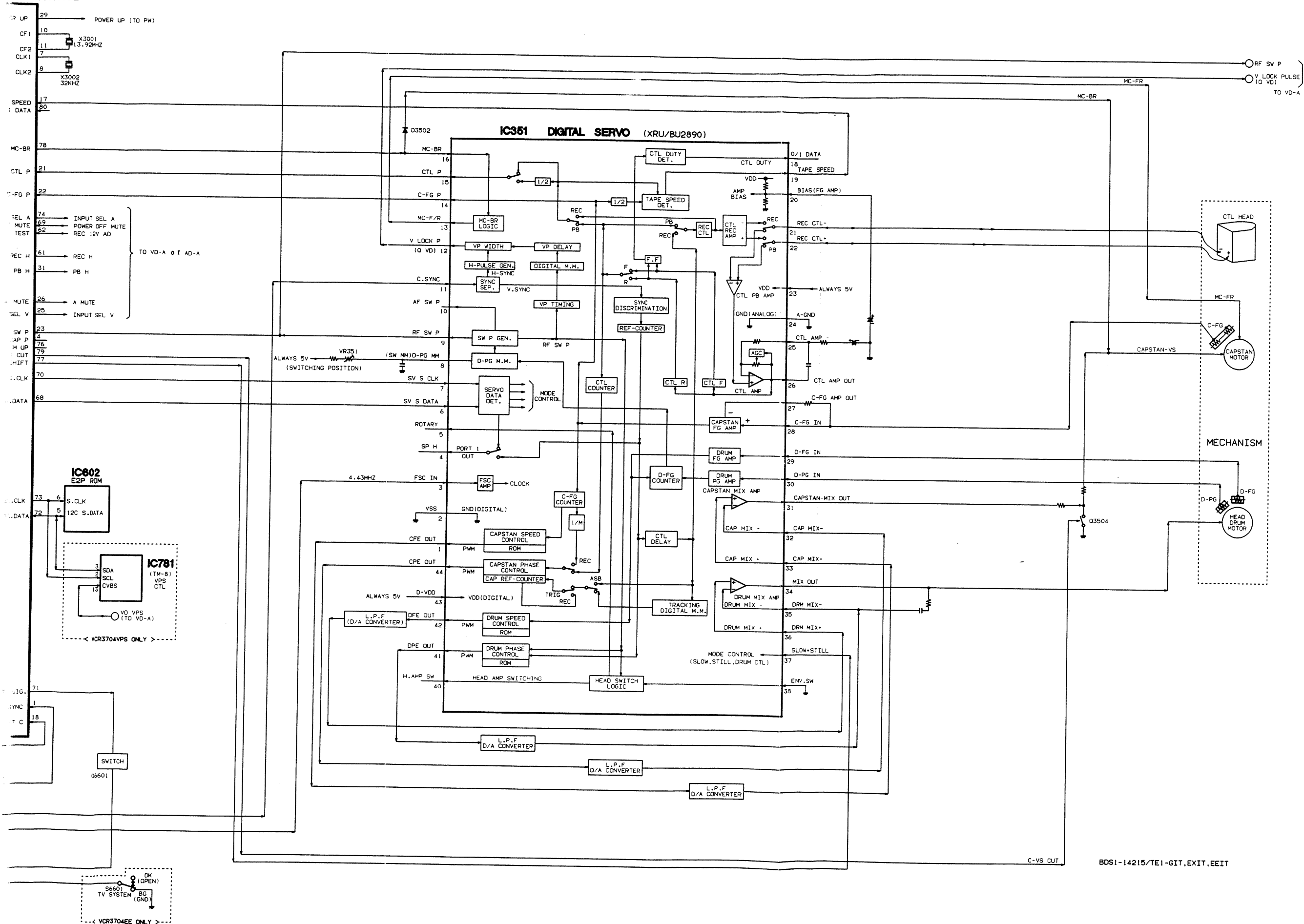


1-3. VIDEO CIRCUIT



1-4. SYSTEM CONTROL & SERVO CIRCUIT

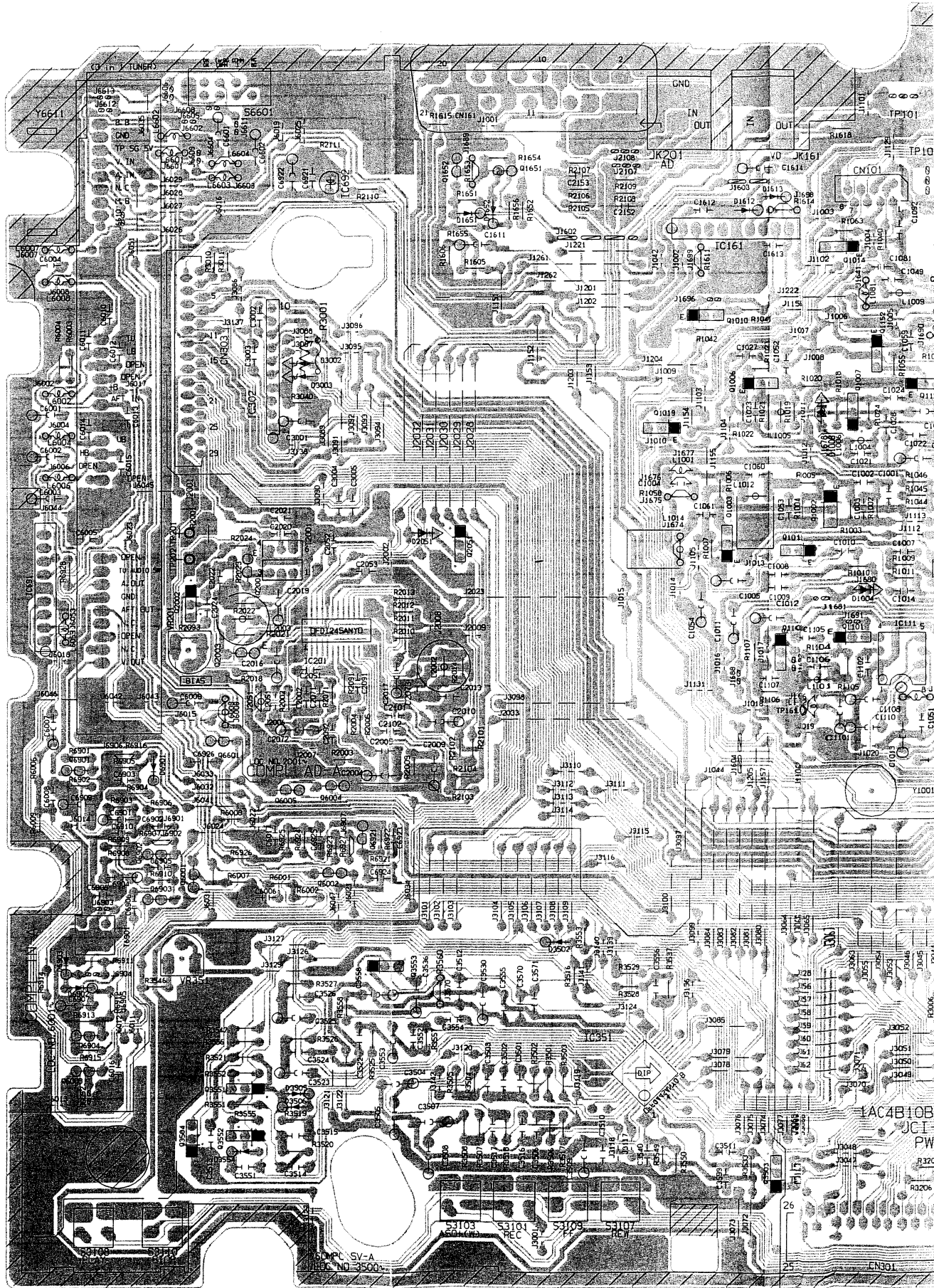
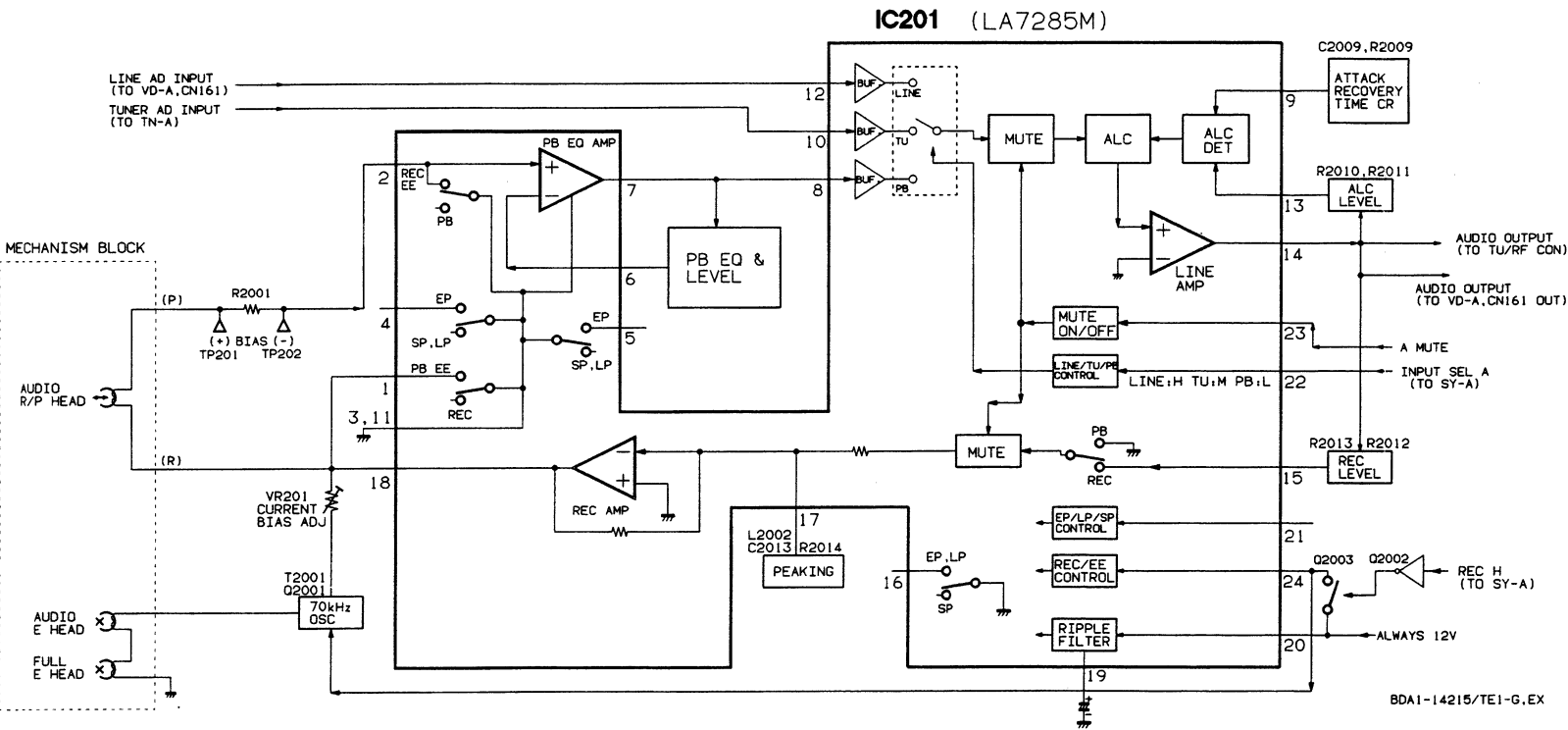
U (CP-1 BOARD)
TROL, (LC866124V)
G CONTROL



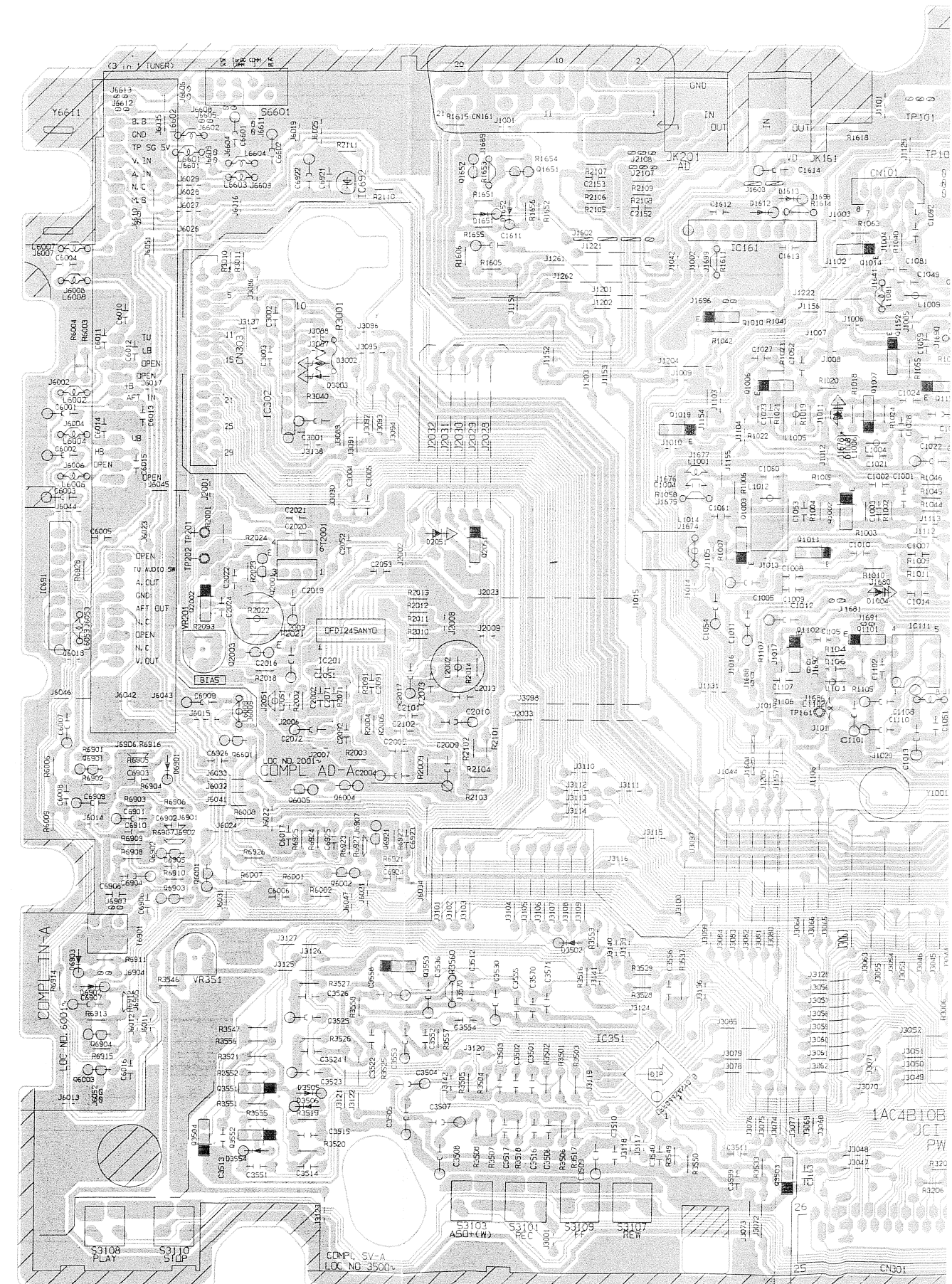
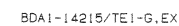
2. CIRCUIT DIAGRAMS & PRINTED WIRING BOARDS (P.W.B.)

2-1. CP-1 P.W.B.

1-5. AUDIO CIRCUIT



IC201 (LA7285M)



2-1. CP-1 P.W.B.

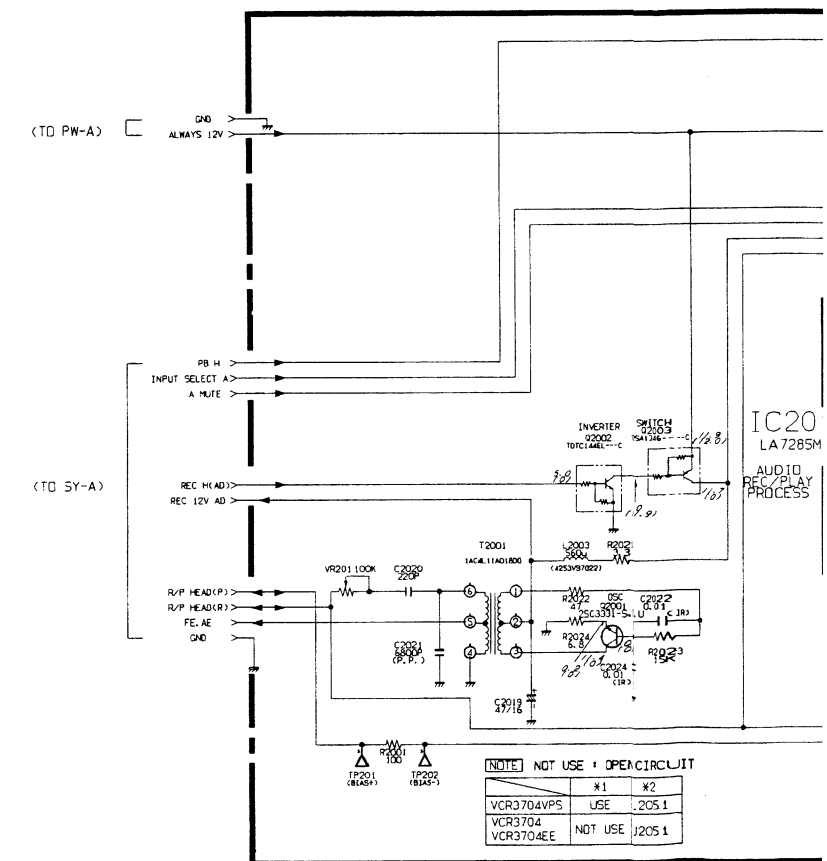
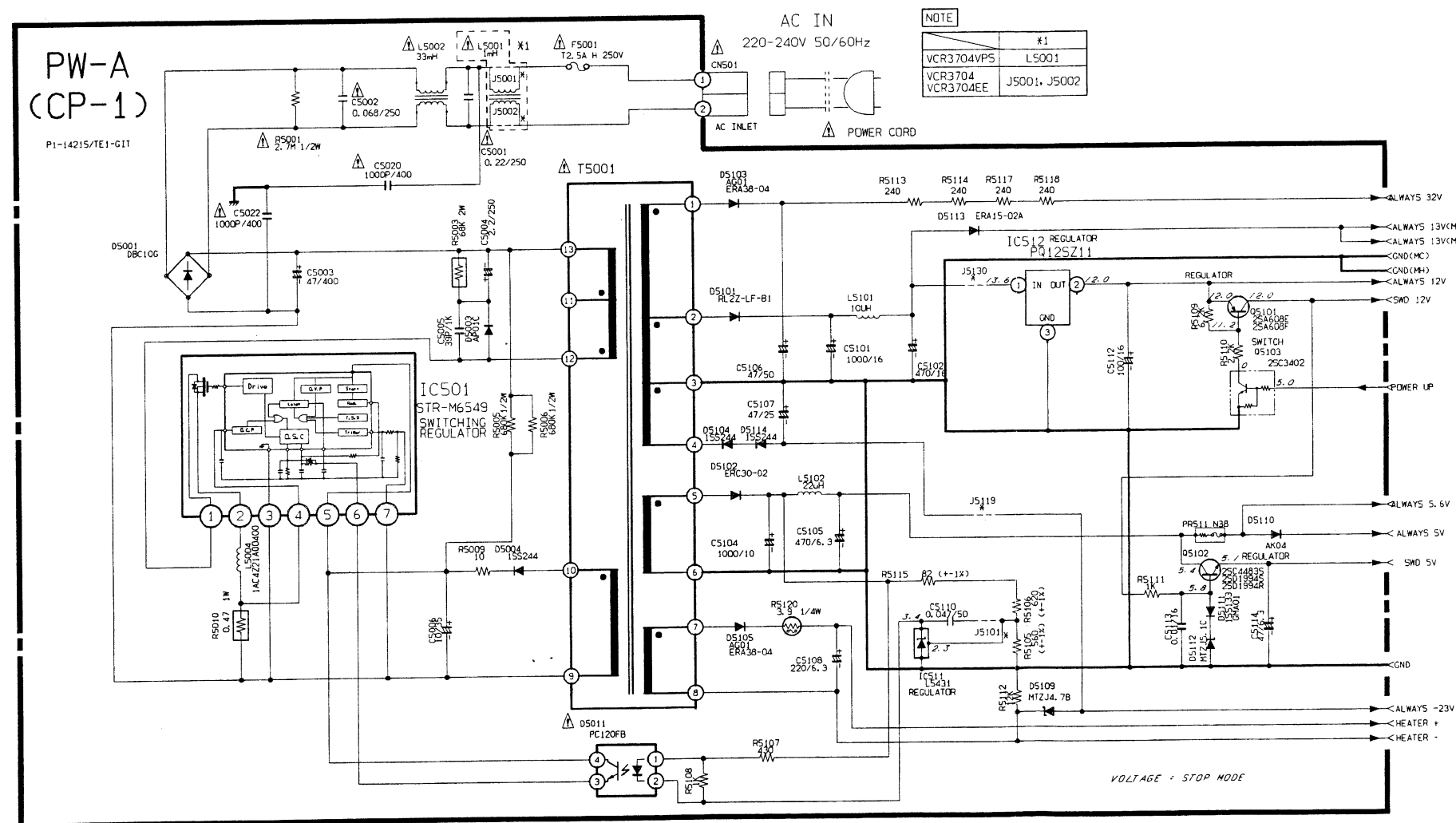


2-1. CP-1 P.W.B.

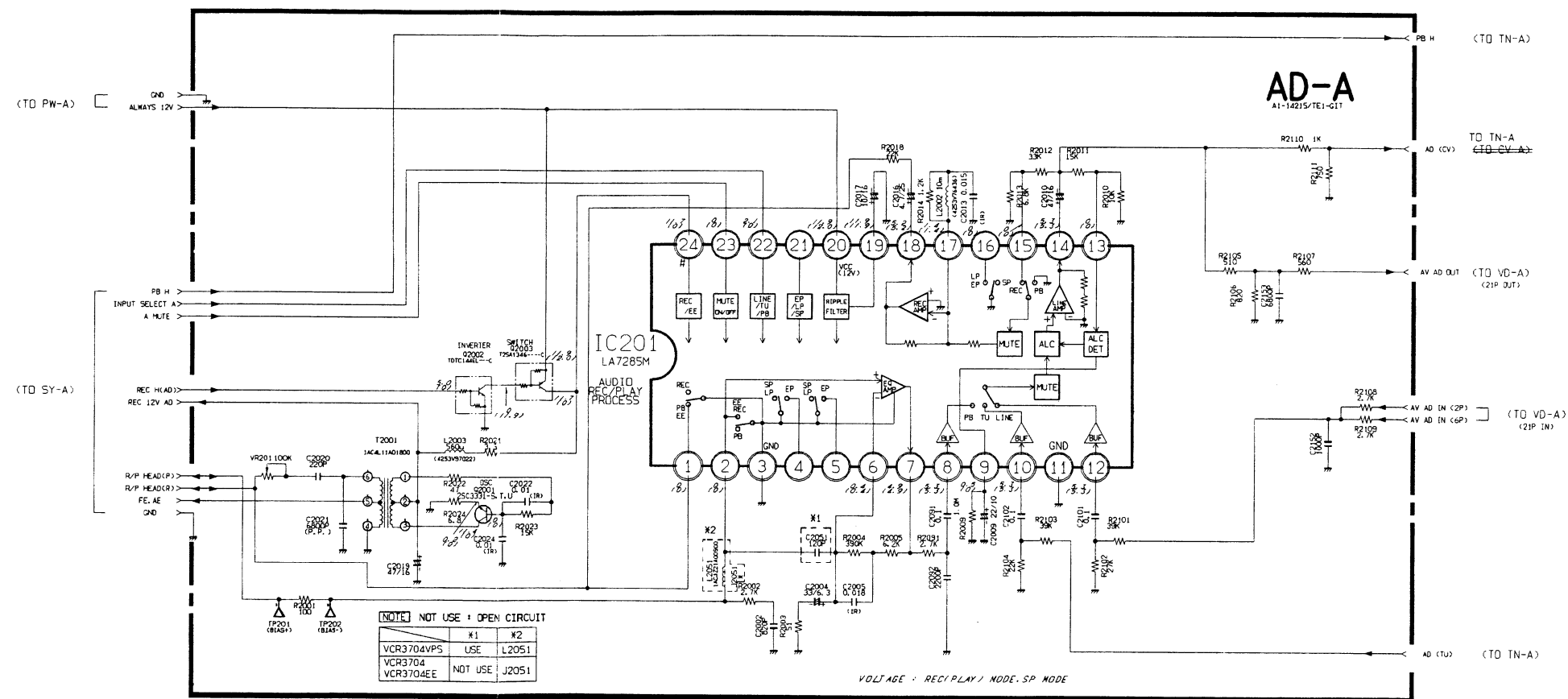


2-2. CP-1 BOARD (PW-A) POWER SUPPLY

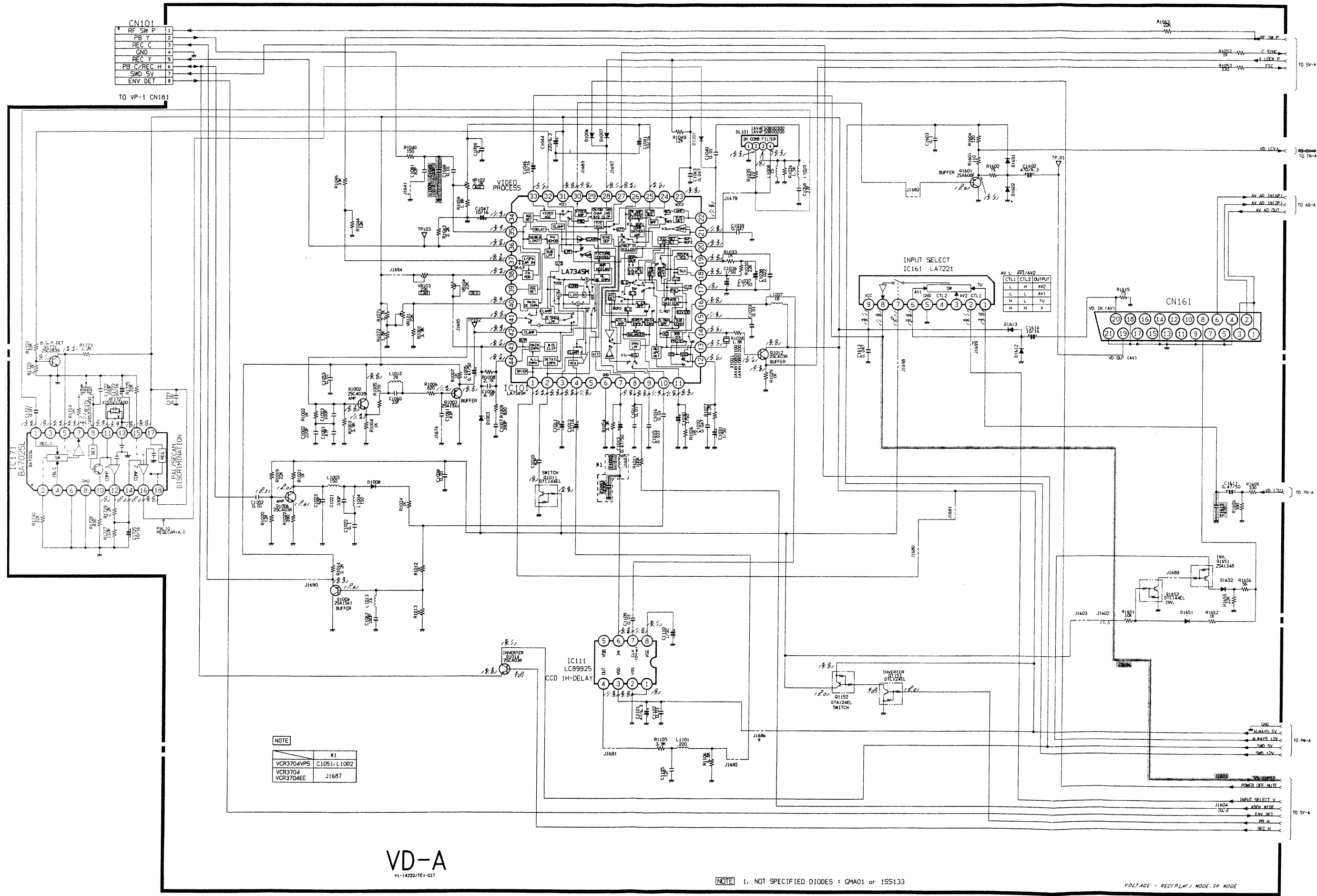
2-3. CF



2-3. CP-1 BOARD (AD-A) AUDIO



2-4. CP-1 BOARD (VD-A) VIDEO



NOTE	
VCR3704VPS	*1
VCR3704	C1051, L1002
VCR3704EE	J1687

NOTE 1. NOT SPECIFIED DIODES : CMA01 or 1SS133

VOLTAGE : REC/PLAY MODE, SP MODE

NOTES:
: Cor
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2-5.

TES

IC1

(VI

IC1

IC1

IC1

IC1

(RE

IC1

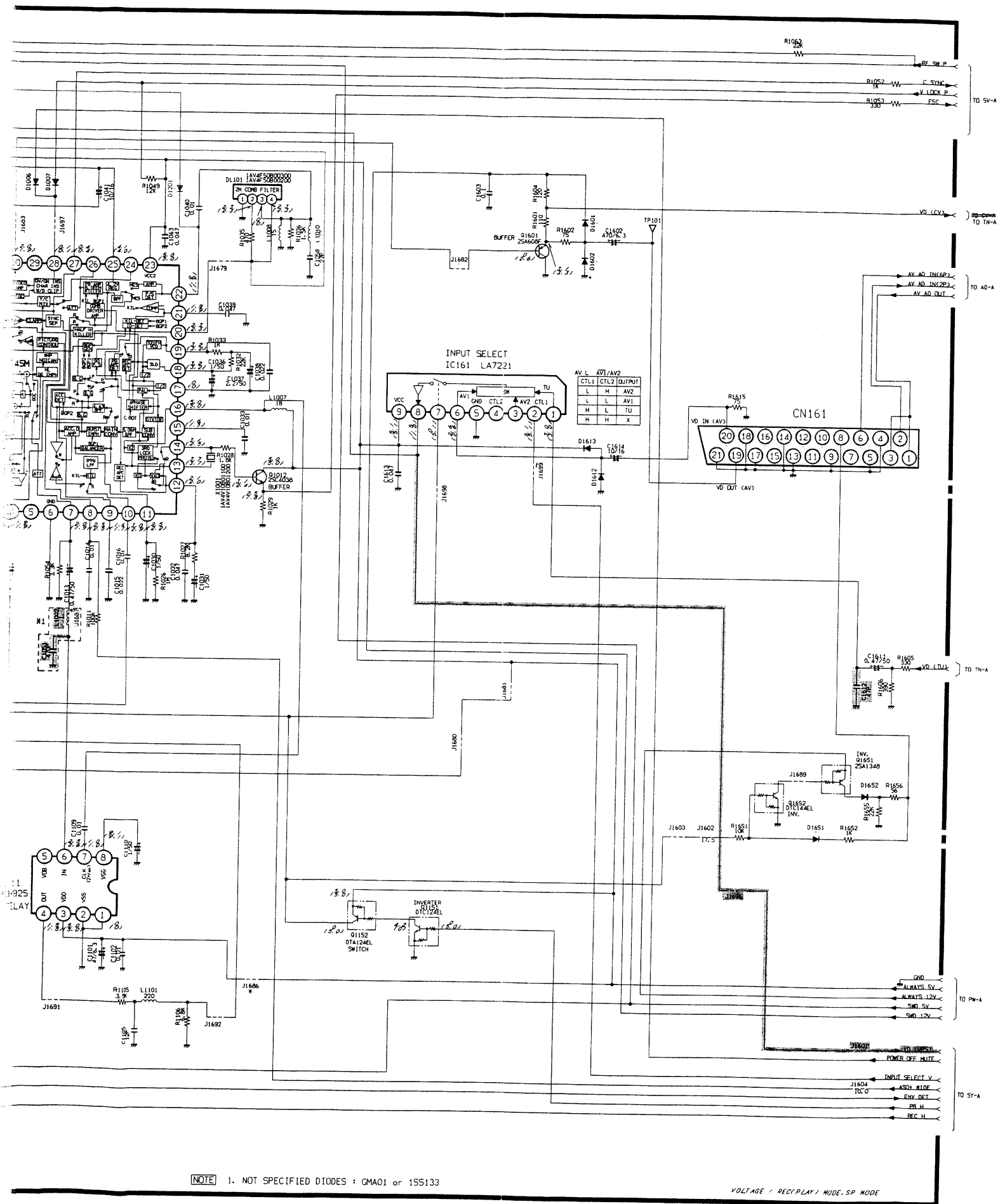
(PB

IC1

IC1

IC1

2-4. CP-1 BOARD (VD-A) VIDEO



2-5. VIDEO CIRCUIT WAVEFORMS

			WF-V-TE		
TEST LOCATION	WAVEFORM	MODE/LEVEL	TEST LOCATION	WAVEFORM	MODE/LEVEL
IC101 Pin 33 (VIDEO IN)		REC, EE 1 Vp-p	IC101 Pin 30 (VIDEO OUT)		PB 2.5 Vp-p
IC101 Pin 41		REC, EE 0.6 Vp-p	IC101 Pin 30 (VIDEO OUT)		REC, EE 2 Vp-p
IC101 Pin 42		REC, EE 0.5 Vp-p	IC101 (UPPER) Pin 30 (LOWER) Pin 28		STILL (UPPER) 2 Vp-p (LOWER) 5 Vp-p
IC101 Pin 43		REC, EE 1.2 Vp-p	IC101 Pin 10 (REC CHROMA OUT)		REC, EE 0.4 Vp-p
IC101 Pin 36 (REC FM OUT)		REC, EE 1.0 Vp-p	Q1006 Base (PB CHROMA)		PB 0.3 Vp-p
IC101 Pin 35 (PB FM IN)		PB 0.3 Vp-p	IC101 Pin 10 (PB CHROMA IN)		PB 0.2 Vp-p
IC101 Pin 41		PB 0.5 Vp-p	IC101 Pin 20		PB 1.0 Vp-p
IC101 Pin 42		PB 0.5 Vp-p	IC101 Pin 26		PB 0.6 Vp-p
IC101 Pin 7/4		PB 0.3 Vp-p			

NOTES:

————: Common parts for VCR3704VPS, VCR3704 & VCR3704EE.

————: The parts for VCR3704EE only.

The parts marked  is VCR3704VPS only.

The parts marked  is VCR3704 only.

A vertical scale from 0 to 10. The scale is labeled with letters A through K. A is at 0, B at 1, C at 2, D at 3, E at 4, F at 5, G at 6, H at 7, I at 8, J at 9, and K at 10.

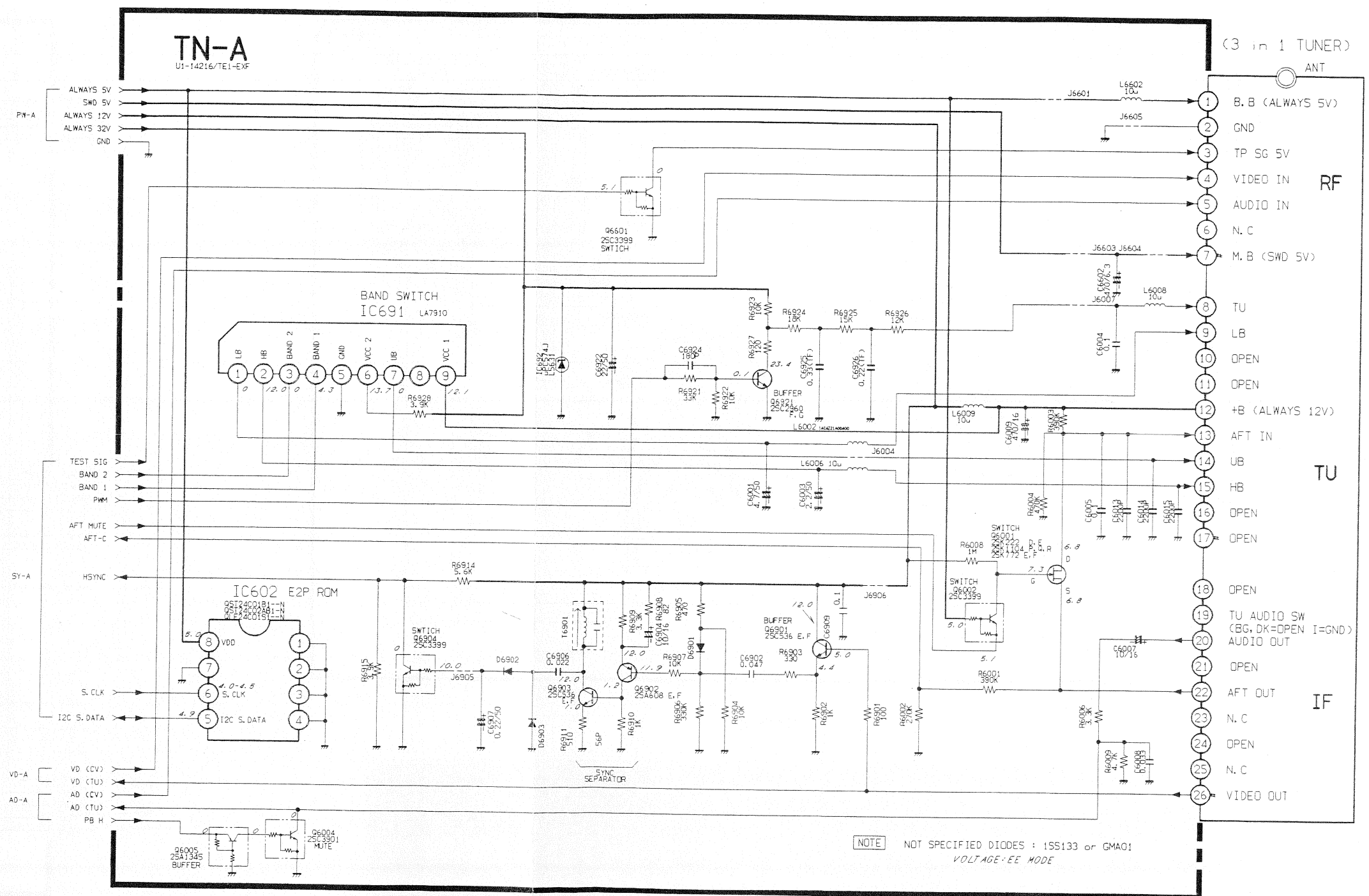
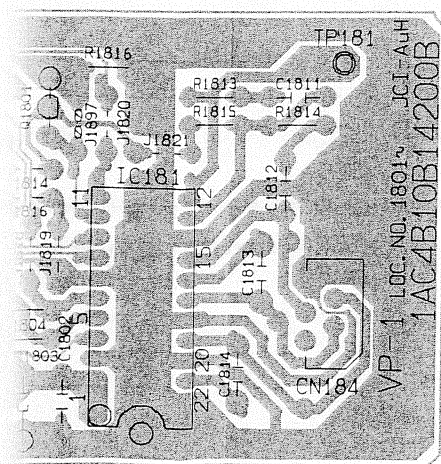
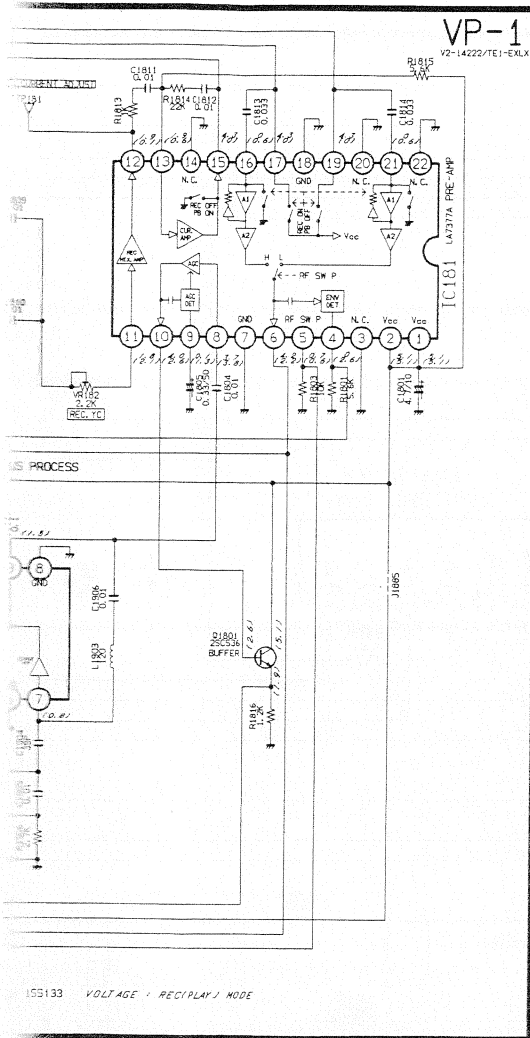


17



2-8. CP-1 BOARD (TN-A) TUNER IF CONNECTION (VCR3704VPS & VCR3704)

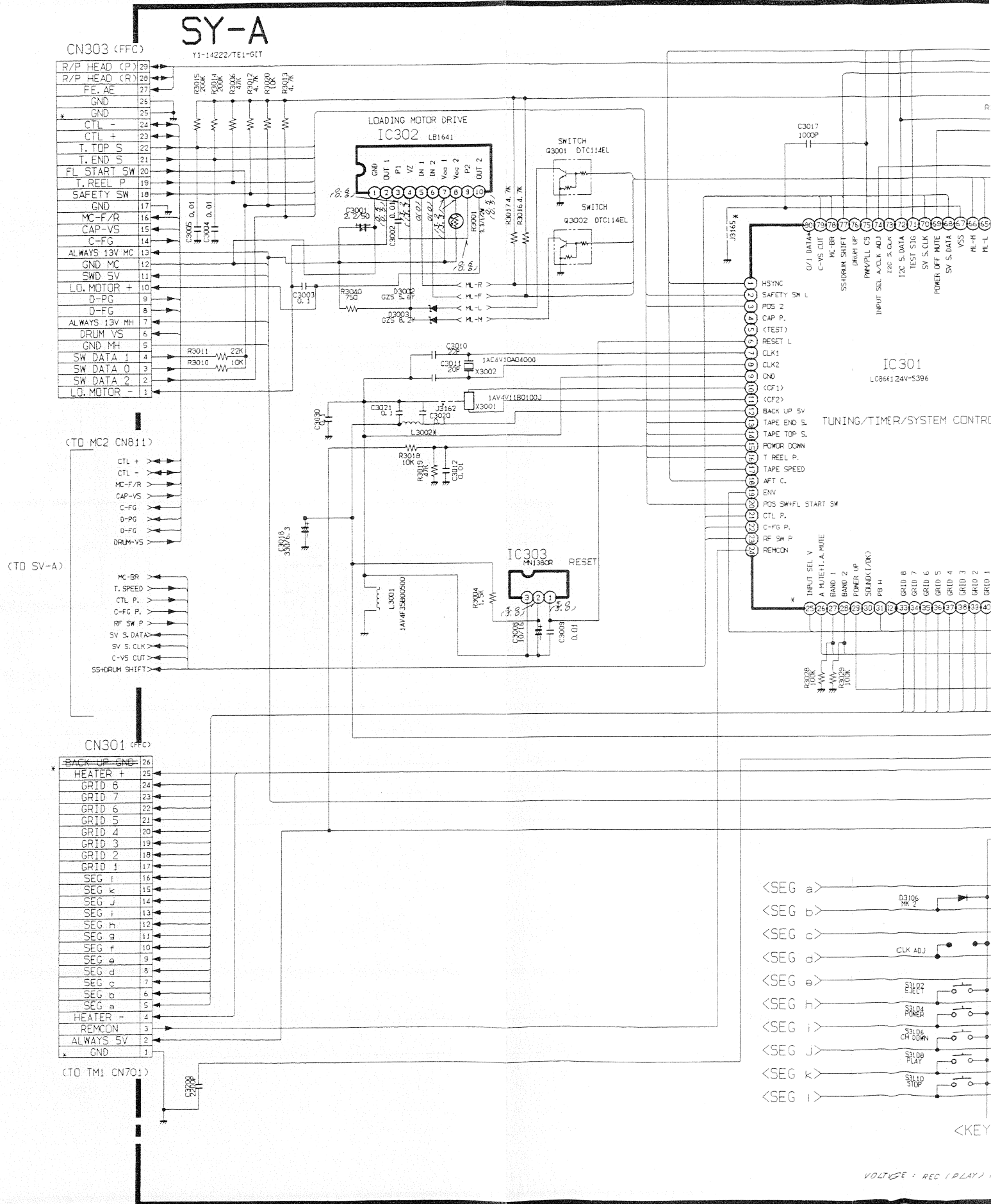
NOTE: The TN-A circuit diagram for the model VCR3704EE is shown in page 31.



2-9. IC301 SYSTEM CONTROL, TIMER, & TUNING CONTROL MPU PIN FUNCTIONS TABLE

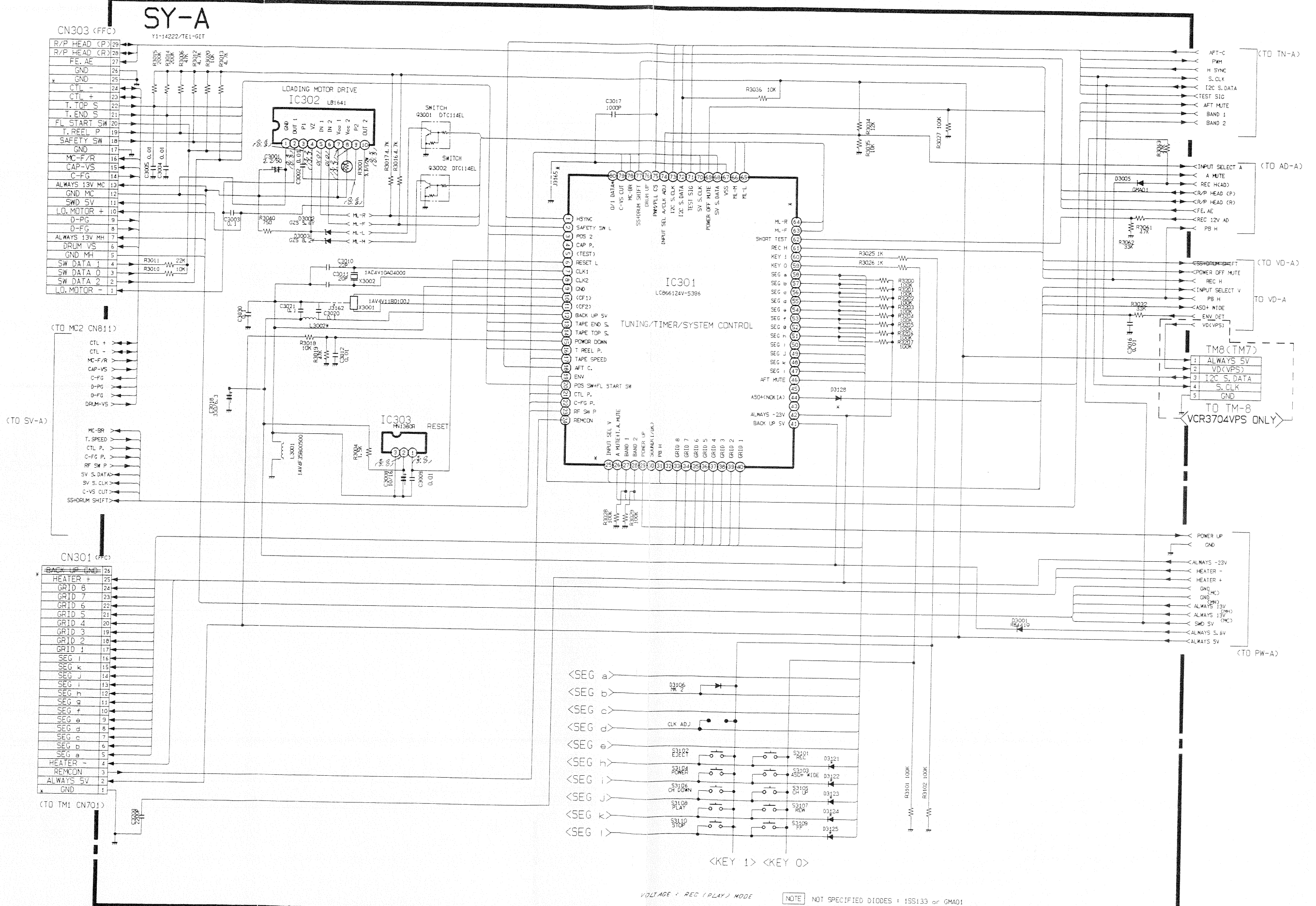
No.	Name	I/O	I/O Signal Function
1	H SYNC	I	Sync. detector signal input for existing channel discrimination.
2	SAFETY SW	I	Input terminal for accidental erasur prevention switch. No operation to recording mode while "LOW" is input.
3	SW DATA 2 (POS 2)	I	Mechanism position switch input terminal. (Terminal voltage ; 5Vdc = EJECT, STOP, REW, FWD, and STILL modes ; 0V = PLAY, REC, R-SEARCH, and F-SEARCH modes.)
4	CAP P.	O	Amplitude control for head motor drive amplifier at SLOW mode. (4head models only)
5	-	-	-
6	RESET	I	Initial reset terminal for this IC.
7	SUB CLK	-	IC clock OSC for timer system.
8	SUB CLK	-	Frequency is 32.768kHz.
9	GND	-	Ground terminal
10	CLK	-	IC clock OSC for main control system.
11	CLK	-	Frequency is 13.92MHz.
12	VDD	-	IC power supply input. (5Vdc)
13	T. END S.	I	Sensor signal input for tape end detection.
14	T. TOP S.	I	Sensor signal input for tape beginning detection.
15	POWER DOWN	I	Power failure detection terminal.
16	T. REEL P.	I	Pulse input for detection of take-up reel table rotation.
17	TAPE SPEED	I	Input of result of tape speed discrimination by digital servo IC.
18	AFT- C	I	Tuner AFT s-curve signal input for tuner AFT function.
19	ENV	I	Video head envelope detection signal input for ATR function.
20	SW DATA 0/1 + FL START	I	Mechanism position switch and front loading start switch input. (Terminal voltage ; 0V = EJECT mode ; 2Vdc = STILL mode ; 3.3Vdc = STOP, REW, FWD, and R-SEARCH modes ; 5Vdc = PLAY, REC, and F-SEARCH modes)
21	CTL P.	I	CTL head recording / playback pulse signal input.
22	C - FG P.	I	FG signal input of capstan motor.
23	RF SW P.	O	Output of RF switching pulse created by head drum PG.
24	REMOCON	I	Remote control signal input.
25	INPUT SEL V	O	Signal for selecting video input source.
26	A MUTE + TU A MUTE	O	Signal for disable audio output signal and tuner audio output signal.
27	BAND1	O	Tuning band data output(BAND1, BAND2).
28	BAND2	O	(L,L)=VHF-LOW (L,H)=VHF-HIGH (H,L)=UHF (H,H)=SKIP
29	POWER UP	O	"HIGH" output except when power is off. Indicating that power is ON.
30	SOUND (I/DK)	O	TV system (I/DK) selection.
31	PB H	O	Signal indicating playback mode.
32	-	-	-
33	GRID 8	O	Display grid outputs (FLD).
34	GRID 7	O	
35	GRID 6	O	
36	GRID 5	O	
37	GRID 4	O	
38	GRID 3	O	
39	GRID 2	O	
40	GRID 1	O	
41	VDD	-	IC power supply input. (5Vdc)
42	V LOAD	O	-23V input for FLD drive.
43	-	-	-
44	ASO +	O	Video signal quality selection.
45	-	-	-
46	AFT MUTE	O	"H" output during tuning AFT mute.
47	SEG i	O	Display segment outputs (FLD). (Includes key-scan output)
48	SEG k	O	
49	SEG j	O	
50	SEG i	O	
51	SEG h	O	
52	SEG g	O	
53	SEG f	O	
54	SEG e	O	
55	SEG d	O	
56	SEG c	O	
57	SEG b	O	
58	SEG a	O	
59	KEY IN 0	I	Operation key data inputs.
60	KEY IN 1	I	
61	REC H	O	Signal for indicating recording mode.
62	SHORT TEST	I	REC mode indication signal input (REC 12V).
63	ML- F	O	Loading motor rotation direction (FWD) indication signal.
64	ML- R	O	Loading motor rotation direction (REV) indication signal.
65	ML- L	O	Loading motor rotation speed (low speed) indication signal.
66	ML- M	O	Loading motor rotation speed (medium speed) indication signal.
67	VSS	-	IC ground terminal.
68	SV S. DATA	O	Output 8-bit X 4 serial data giving operation mode and tracking data, etc., to digital servo IC.
69	POWER OFF MUTE	O	Video signal mute during power off.
70	SV S. CLK	O	The clock pulse for digital servo IC.
71	TEST SIG	O	RF test signal ON/OFF control.
72	I2C DATA	I/O	Terminal for communication of respective data with tuning data memory IC.
73	I2C S. CLK	O	The clock pulse for tuning data memory IC.
74	INPUT SEL A	O	Signal for selecting audio input source.
75	PWM	O	Tuning voltage output (PWM signal).
76	DRUM UP / DOWN	O	Head drum motor rotation speed up and down signal.
77	SS + DRUM SHIFT	O	Signal for indicating SLOW/STILL modes and alternation of drum motor control data. (3 value voltage)
78	MC - BR	O	Brake signal for capstan motor.
79	C - Vs CUT	O	Cut off for capstan motor control voltage in SLOW / STILL modes.
80	0 / 1 DATA	I	CTL pulse duty detection signal input. Used for VISS detection.

2-10. CP-1 BOARD (SY-A) SYST



VOLTAGE : REC (PLAY) 1

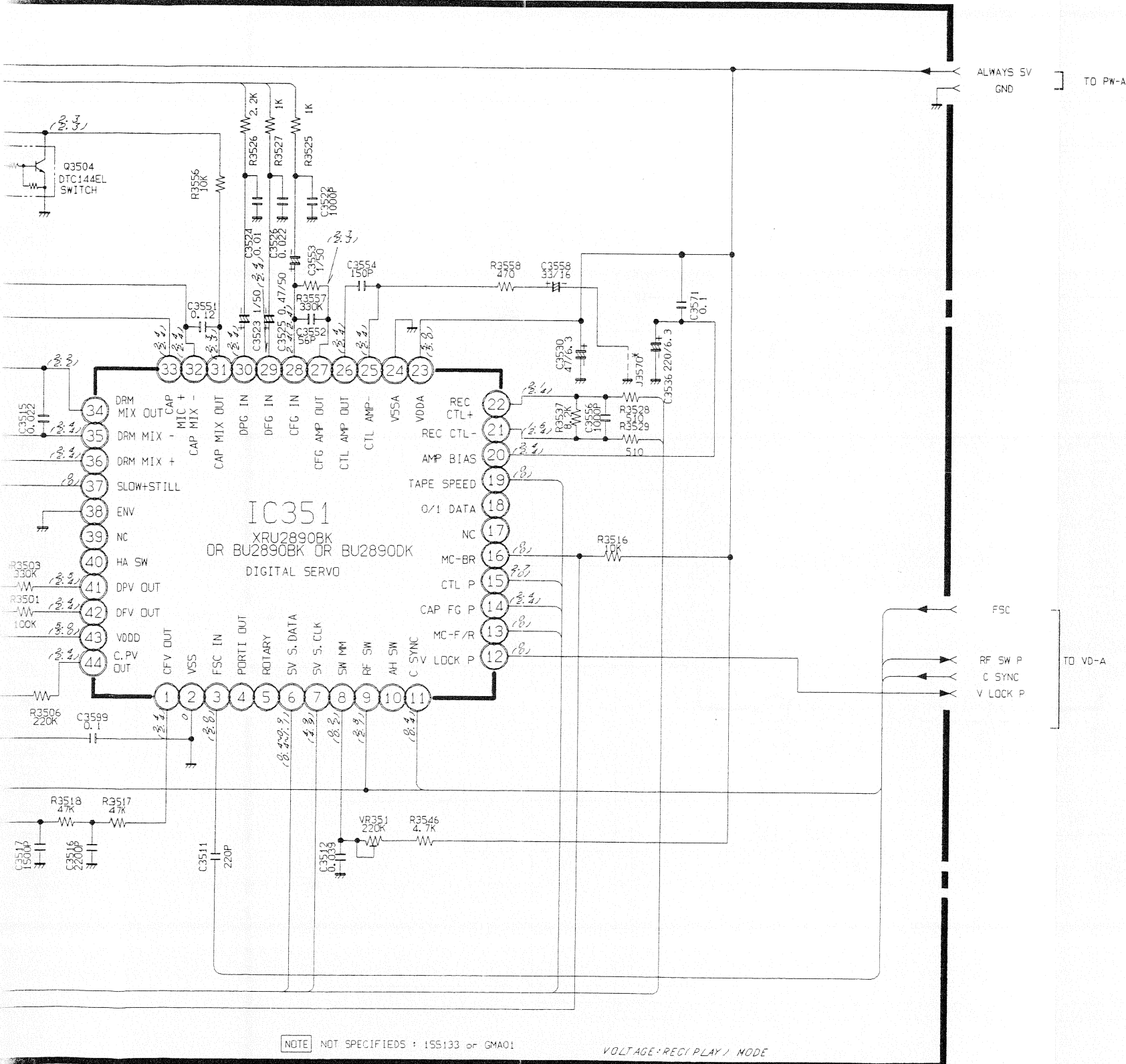
2-10. CP-1 BOARD (SY-A) SYSTEM CONTROL



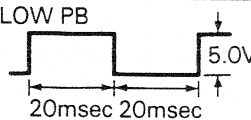
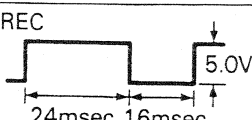
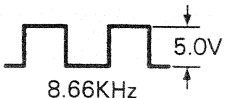
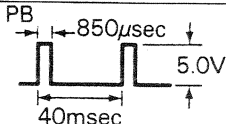
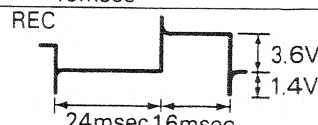
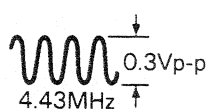
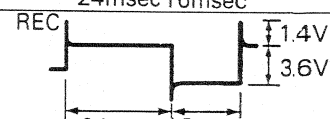
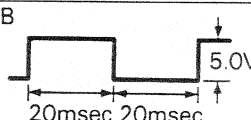
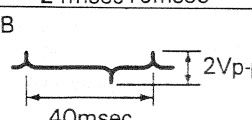
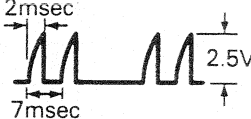
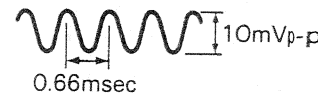
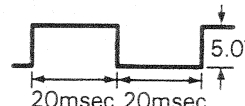
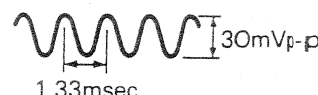
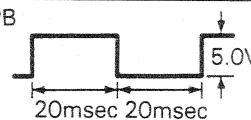
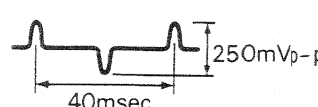
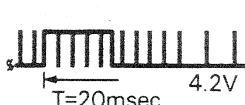
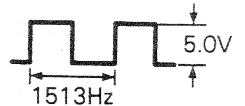
2-'



11. CP-1 BOARD (SV-A) SERVO

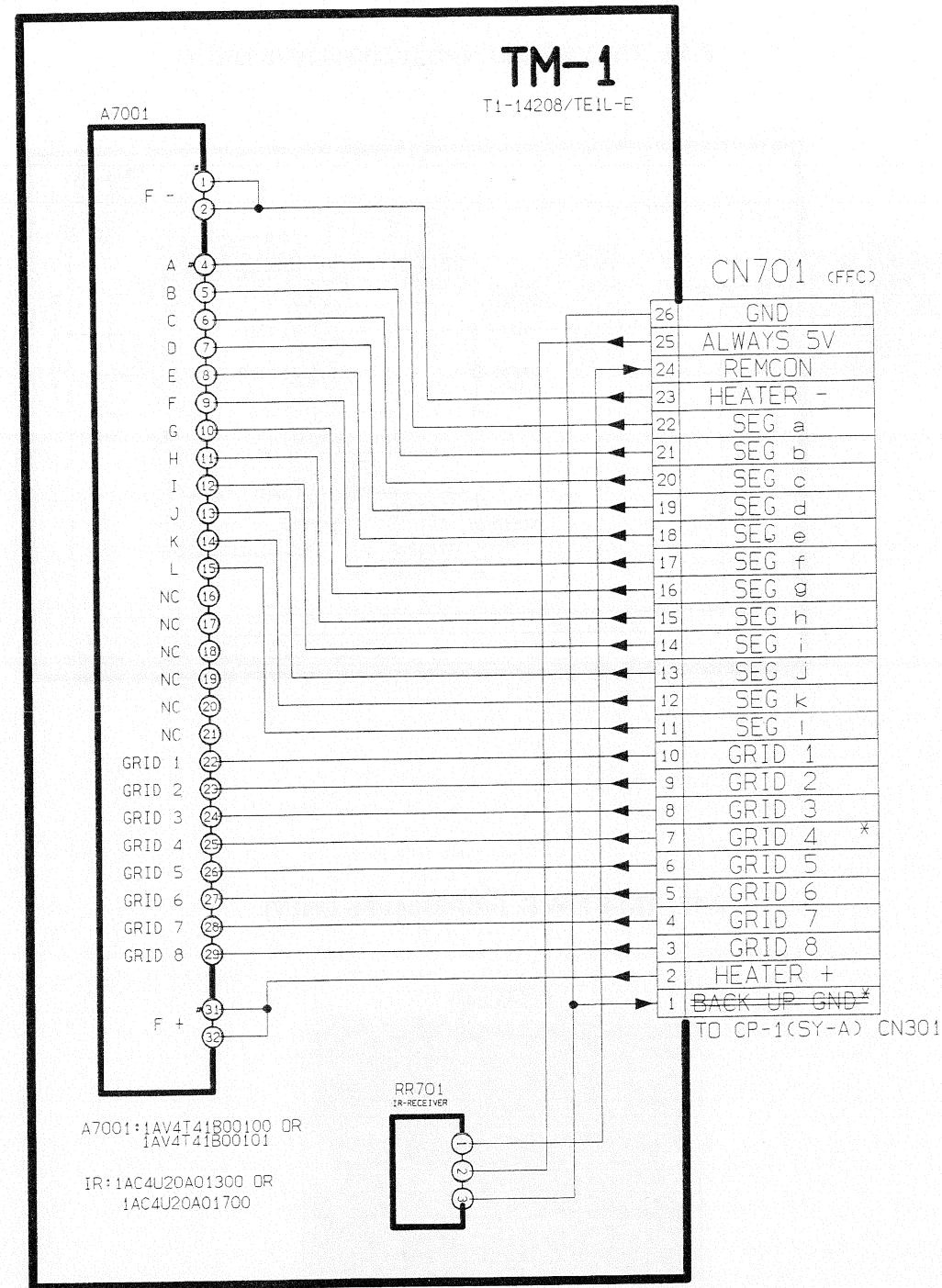


2-12. SERVO CIRCUIT WAVEFORMS (IC351:XRU2890 Series)

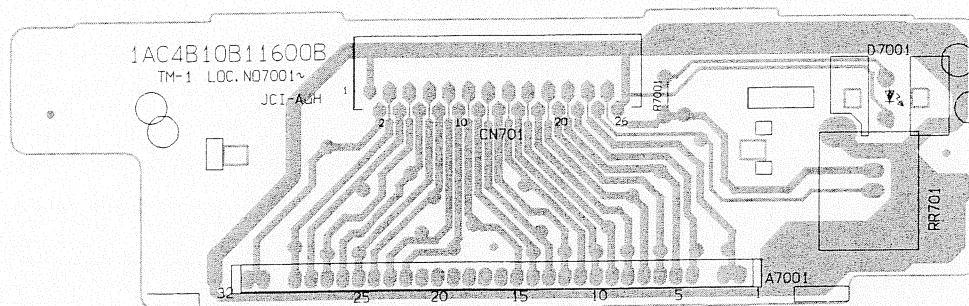
TEST LOCATION	WAVEFORM & MODE/LEVEL	TEST LOCATION	WAVEFORM & MODE/LEVEL
Pin 40 (H.A.SWITCHING)		Pin 15 (CTL PULSE)	
Pin 42 (PWM)		Pin 15 (CTL PULSE)	
Pin 41, 44, 1 (PWM)		Pin 21 (CTL HEAD-)	
Pin 3 (FSC INPUT)		Pin 22 (CTL HEAD+)	
Pin 5 (ROTARY)		Pin 26 (CTL AMP OUT)	
Pin 8 (D-PG MM)		Pin 28 (C-FG INPUT)	
Pin 9 (RF SW PULSE)		Pin 29 (D-FG INPUT)	
Pin 10 (AF SW PULSE)		Pin 30 (D-PG INPUT)	
Pin 11 (COMPOSITE SYNC INPUT)		Pin 38 (ENV.SW INPUT)	
Pin 14 (C-FG PULSE)			

WF-S-TP4

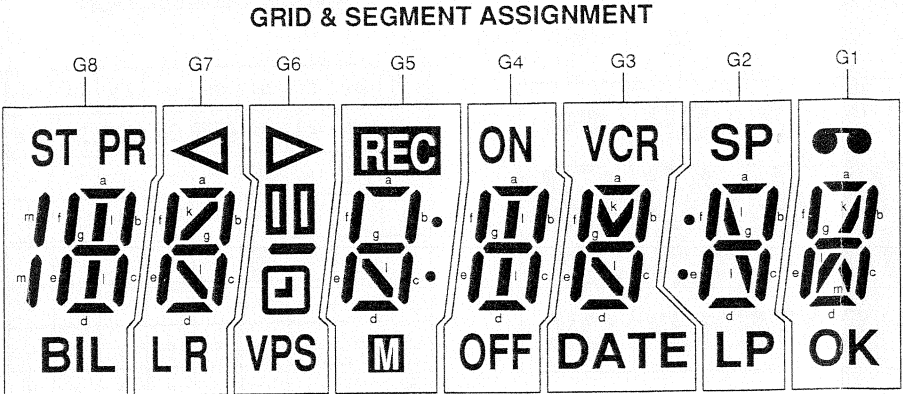
2-13. TM-1 BOARD DISPLAY (FLD)



2-14. TM-1 P.W.B.



2-15. A7001 DISPLAY (FLD) GRID/ANODE ASSIGNMENT DRAWING & TABLE

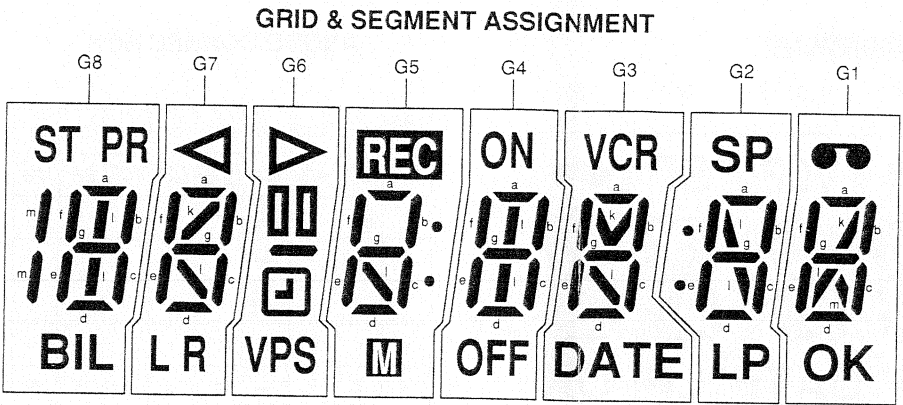


ANODE CONNECTION

GRID	G8	G7	G6	G5	G4	G3	G2	G1
a	ST	PR	REC	ON	VCR	SP	OK	
b	PR	k			k		k	
c	a	a		a	a	a	a	a
d	b	b		b	b	b	b	b
e	c	c		c	c	c	c	c
f	d	d		d	d	d	d	d
g	e	e		e	e	e	e	e
h	f	f		f	f	f	f	f
i	g	g		g	g	g	g	g
j	h	h		h	h	h	h	h
k	m	L						m
l	BIL	R	VPS	M	OFF	DATE	LP	OK

GR-00100

2-15. A7001 DISPLAY (FLD) GRID/ANODE ASSIGNMENT DRAWING & TABLE

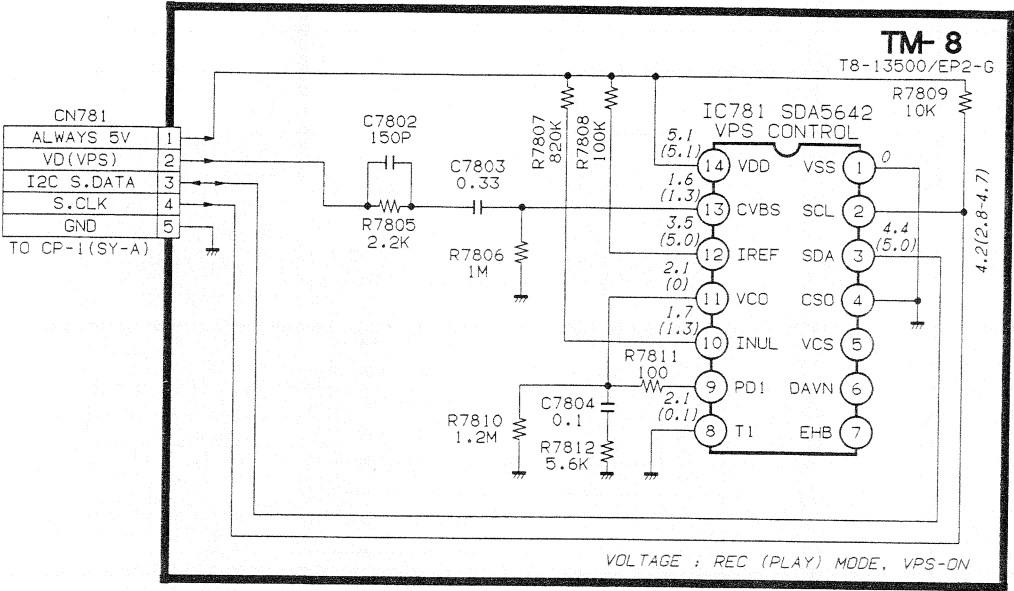


ANODE CONNECTION

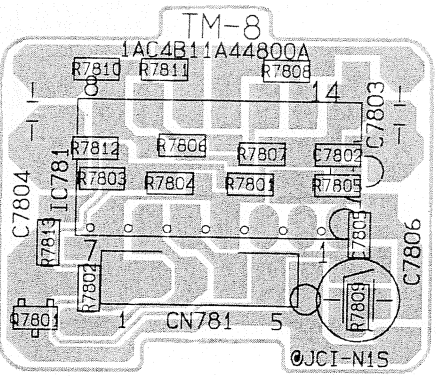
GRID	G8	G7	G6	G5	G4	G3	G2	G1
a	ST	◀	▶	REC	ON	VCR	SP	◀▶
b	PR	k	□	—	—	k	—	k
c	a	a	—	a	a	a	a	a
d	b	b	□	b	b	b	b	b
e	c	c	—	c	c	c	c	c
f	d	d	—	d	d	d	d	c
g	e	e	—	e	e	e	e	e
h	f	f	—	f	f	f	f	f
i	g	g	—	g	g	g	g	g
j	l	l	—	l	l	l	l	l
k	m	L	—	·	—	·	—	m
l	BIL	R	VPS	◻	OFF	DATE	LP	OK

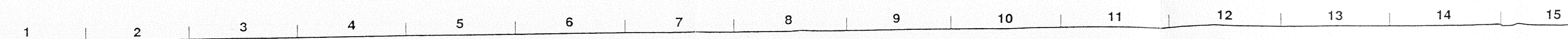
GR-00100

2-16. TM-8 BOARD VPS (VCR3704VPS ONLY)



2-17. TM-8 P.W.B. (VCR3704VPS ONLY)







V10071

NOKIA
CONSUMER ELECTRONICS**Service-Manual****VR****1993****NOKIA**

VCR 3704, 3704 EE, 3704 VPS
VCR 3714 VPS/SV, 3714 SV
VCR 3724 IR/VP, 3724 UK/VP
VCR 3744 VPS/SV, 3744 SV, 3744 UK/VP
VCR 3764 HIFI N, 3764 HIFI VPS
VCR 3784 HIFI N/SV, 3784 HIFI UK/VP
VCR 3784 HIFI VPS/SV, 3784 HIFI IR/VP

SALORA

VCR 624
VCR 824 SV
VCR 914 HIFI N
VCR 924 HIFI N/SV

LUXOR

VCR 4704
VCR 4744 SV
VCR 4764 HIFI N
VCR 4784 HIFI N/SV

Mechanik-Justagen

Schaltbilder, Leiterplatten, Ersatzteile-Liste, Elektrischer Abgleich, siehe nächste Seite.

Bei Reparaturen gültige Sicherheitsvorschriften beachten!

Mechanical adjustments

Circuit diagrams, P. C. B., spare parts list, electrical alignment, see next page.

Service and repair work to be performed only in accordance with existing safety regulations!

Mécanique ajustages

Schémas, circuits imprimés, liste des pièces détachées, alignement, voir page suivante.

Pendant le dépannage, respecter les réglementations du sécurité!

Liste der Service-Manuale List of Service Manuals Liste des manuels	Elektrischer Abgleich, Schaltbilder, Leiterplatten, Ersatzteile-Liste	Mechanik-Justagen
Modell Model Modèle	Electrical alignment, circuit diagram, P.C.B., spare parts list Alignment, schémas circ. imprimés, liste des pièces détachées No.	Mechanical adjustments Mécanique ajustages No.
NOKIA VCR 3704 VPS NOKIA VCR 3704 NOKIA VCR 3704 EE	6611 74 35	6611 74 46 NOTE! Manual 6611 74 46 is only a supplement for the '93 models. The Basic Manual is 6611 77 06. (1990).
LUXOR VCR 4704 SALORA VCR 624	6611 74 36	
NOKIA VCR 3744 VPS/SV NOKIA VCR 3744 SV NOKIA VCR 3744 UK/VP	6611 74 37	
LUXOR VCR 4744 SV SALORA VCR 824 SV	6611 74 38	
NOKIA VCR 3764 HIFI VPS NOKIA VCR 3764 HIFI N	6611 74 39	
LUXOR VCR 4764 HIFI N SALORA VCR 914 HIFI N	6611 74 40	
NOKIA VCR 3784 HIFI VPS/SV NOKIA VCR 3784 HIFI N/SV NOKIA VCR 3784 HIFI UK/VP	6611 74 41	
LUXOR VCR 4784 HIFI N/SV SALORA VCR 924 HIFI N/SV	6611 74 42	
NOKIA VCR 3724 UK/VP NOKIA VCR 3724 IR/VP	6611 74 43	
NOKIA VCR 3714 VPS/SV NOKIA VCR 3714 SV	6611 74 44	
NOKIA VCR 3784 HIFI IR/VP	6611 74 45	

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1. OUTLINE OF '93 MIDI MID-MOUNT MECHANISM

The '93 Midi mid-mount mechanism is used for video tape recorders shipped as new products of 1993. The '93 Midi mid-mount mechanism has the same basic structures as the P90 mechanism shipped in 1990 except the following. As this manual omits the description of parts which are the same as those of P90, please refer to the P90 Mechanism Basic Manual (No. 6611 77 06).

- (1) Some models have new reel drive system parts (supply reel table, take up reel table, reel gear (S), reel gear (T), COMPL idler clutch). As these are not interchangeable with the older ones, be sure to check the parts list when replacing them.
- (2) The main cam gear, load rack and load gear (T) have been replaced with new ones to further simplify the tape loading mechanism. Therefore, the load cam lever of the old mechanism is not required. The new tape loading mechanism is shown in the figure 2-1.
- (3) The MC-2 and MC-3 boards between the loading motor and system control circuit have been replaced with new ones. The MC-2 board incorporated in the HiFi model is different from that incorporated in the MONAURAL model. Therefore when using the mode selector (VHJ-0050) of the service tool, each model will require its own relay board. The MC-2 board used in the HiFi model and MONAURAL model of the 92 Midi mid-mount mechanism can be differentiated as follows.
[HiFi model]
The gilt side of its MC-2 board is marked "T-HiFi" in big letters. Its CN811 connector has 24 pins. VHJ-0092 is used as the relay board.
[MONAURAL model]
The gilt side of its MC-2 board is marked "T-MONO" in big letters. Its CN811 connector has 29 pins. VHJ-0094 is used as the relay board.
- (4) The pulley bracket is no longer used and the special screw has been employed.
- (5) The shape of the clutch lever assembly has been partially changed and the damper is no longer used.
- (6) The shape of the front helical gear of the loading motor has been partially changed and the washer is no longer used.
- (7) The 4 screws for mounting the gear bracket assembly of the cassette holder mechanism have been reduced to 3 screws.
- (8) Some models do not have the impedance roller.
- (9) The height adjustment of the exit side fixed guide no longer required as the precision of the tape running system has been heightened.
- (10) The form of MC-1 and MC-4 board connector (CN801) near the reel drive part has been changed.
- (11) The auto head cleaner mechanism is used for cleaning the video head automatically during loading and unloading.

2. SECTIONS CHANGED FROM P90 MECHANISM

The page number within the parenthesis above each title mentioned later indicates the page number of the P90 Mechanism Basic Manual (No. 6611 77 06). Replace the page numbers with those in the parenthesis on usage.

2-2. DESCRIPTION OF MECHANISM DRIVE

To realize the thin type mechanism, a loading motor and two pieces of cam (MAIN CAM GEAR and the MODE CAM GEAR) to be driven by the said motor are mounted on the upper part of the capstan motor, that was a dead space in the conventional mechanisms hitherto available, with a view to optimization of parts mounting layout. (Fig. 2-1 and Fig. 2-2.)

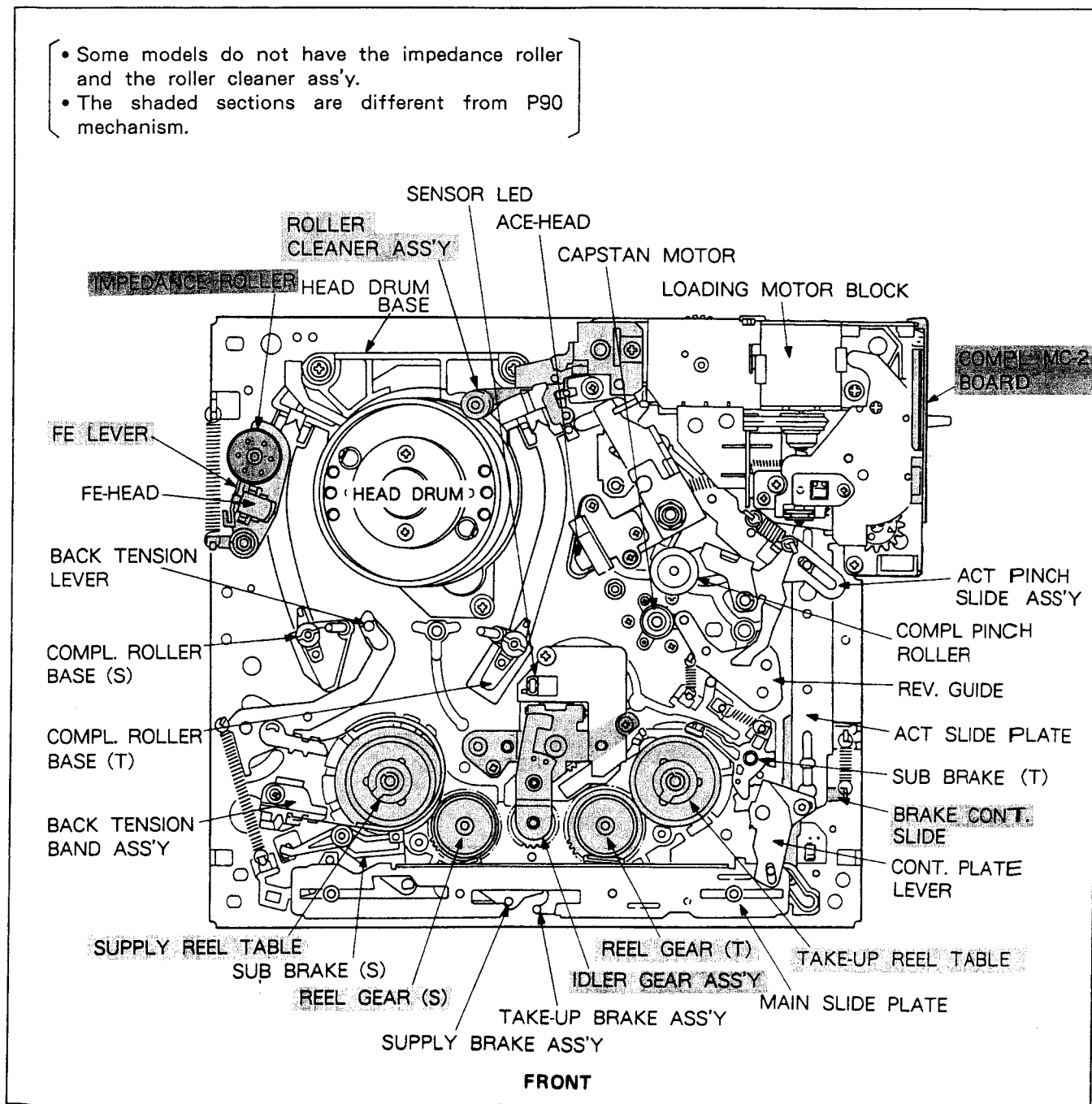


Fig. 2-1. Top View of Mechanism (Initial mode)

- Some models do not have the capstan soft brake.
- The shaded sections are different from P90 mechanism.

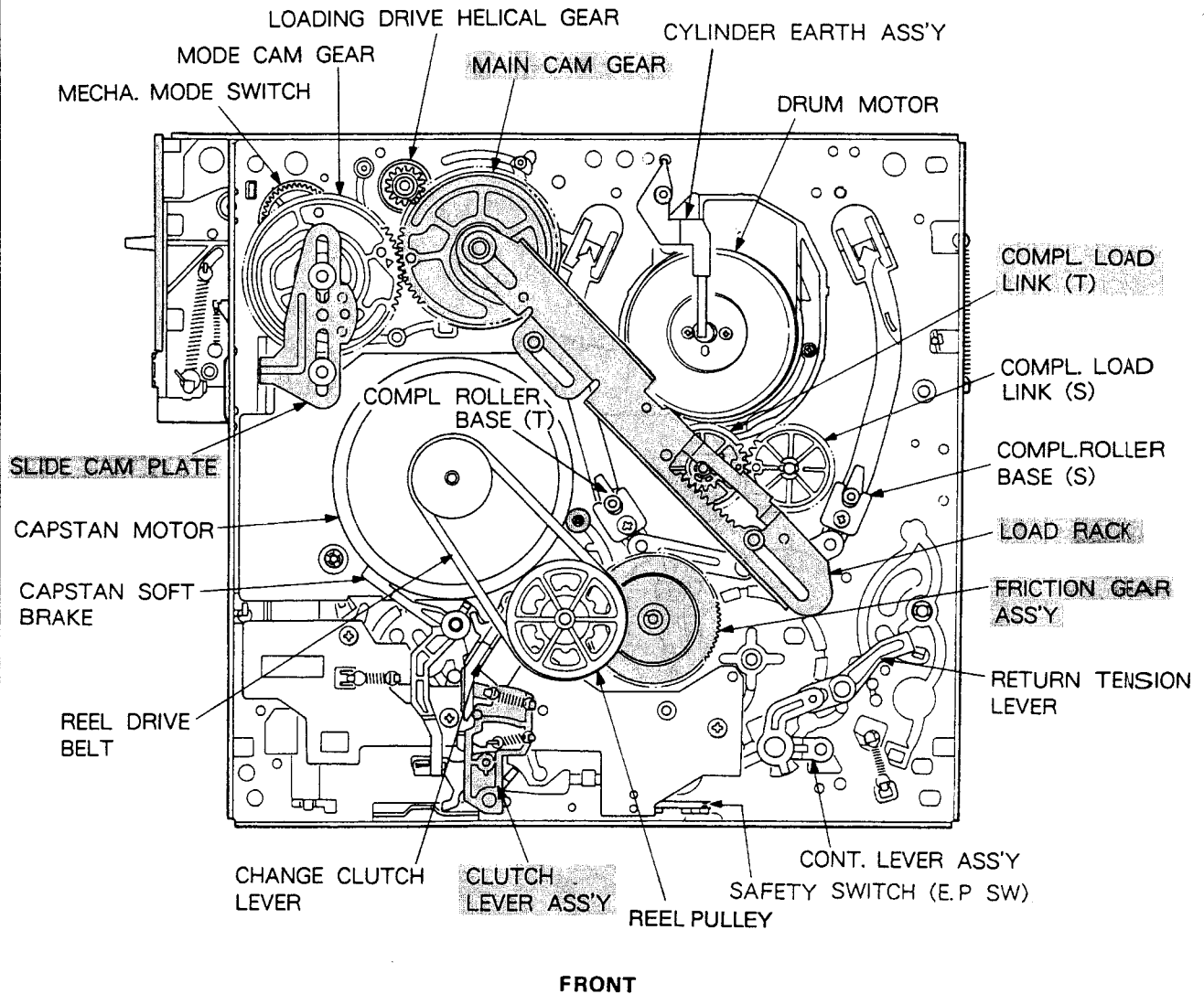


Fig. 2-2. Bottom View of Mechanism (Initial mode)

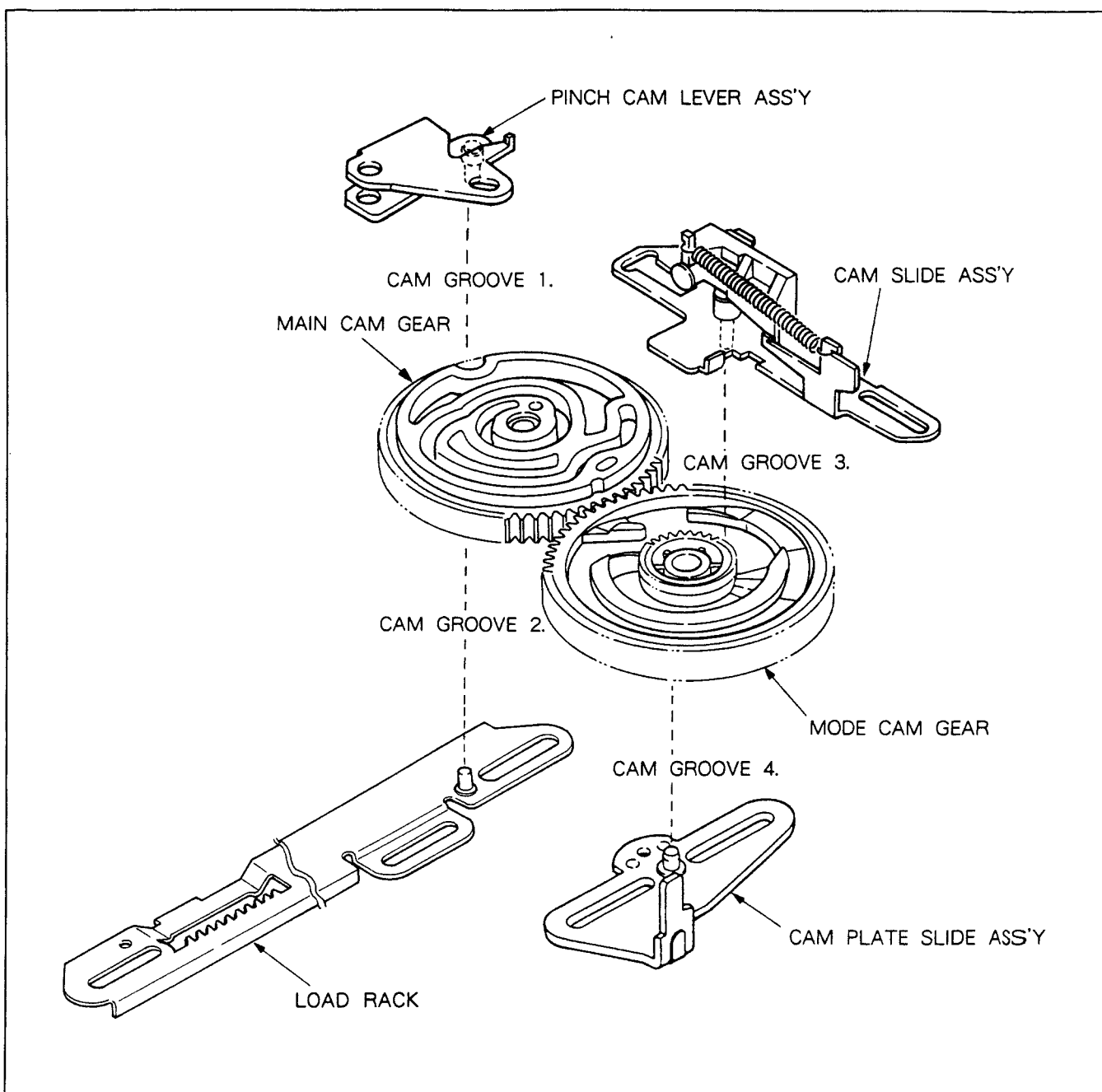


Fig. 2-4. View of Cams Construction

(1) Tape Loading Mechanism

The tape loading mechanism is compactly designed with use of a LOAD RACK for loading by drive from the before-mentioned MAIN CAMS with CAM GROOVE 2. The LOAD RACK is laid on the dead space in between the DD capstan motor and the head motor for effective space utilization. (Fig. 6-2-5) The process from tape pull-out upon loading to

contact of the leading guide section with the stopper of drum base and press-fitting under tension of spring is guided and driven in such a manner that the rod is drawn inward from the outer circumferential direction of the CAM GROOVE 2, thereby reducing the load torque (PV value) to the CAM GROOVE. And, the load of the loading motor is minimized to enhance reliability.

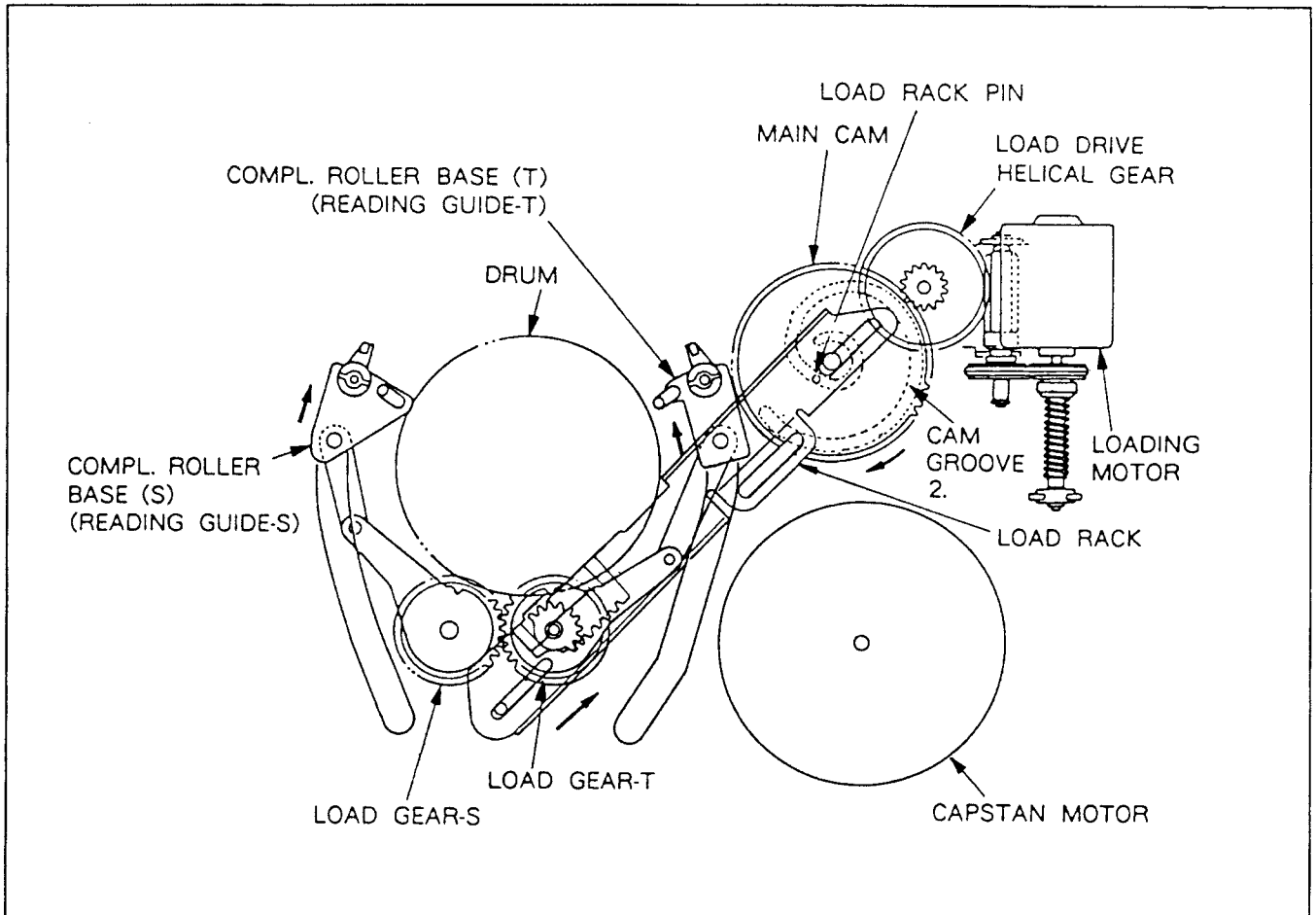
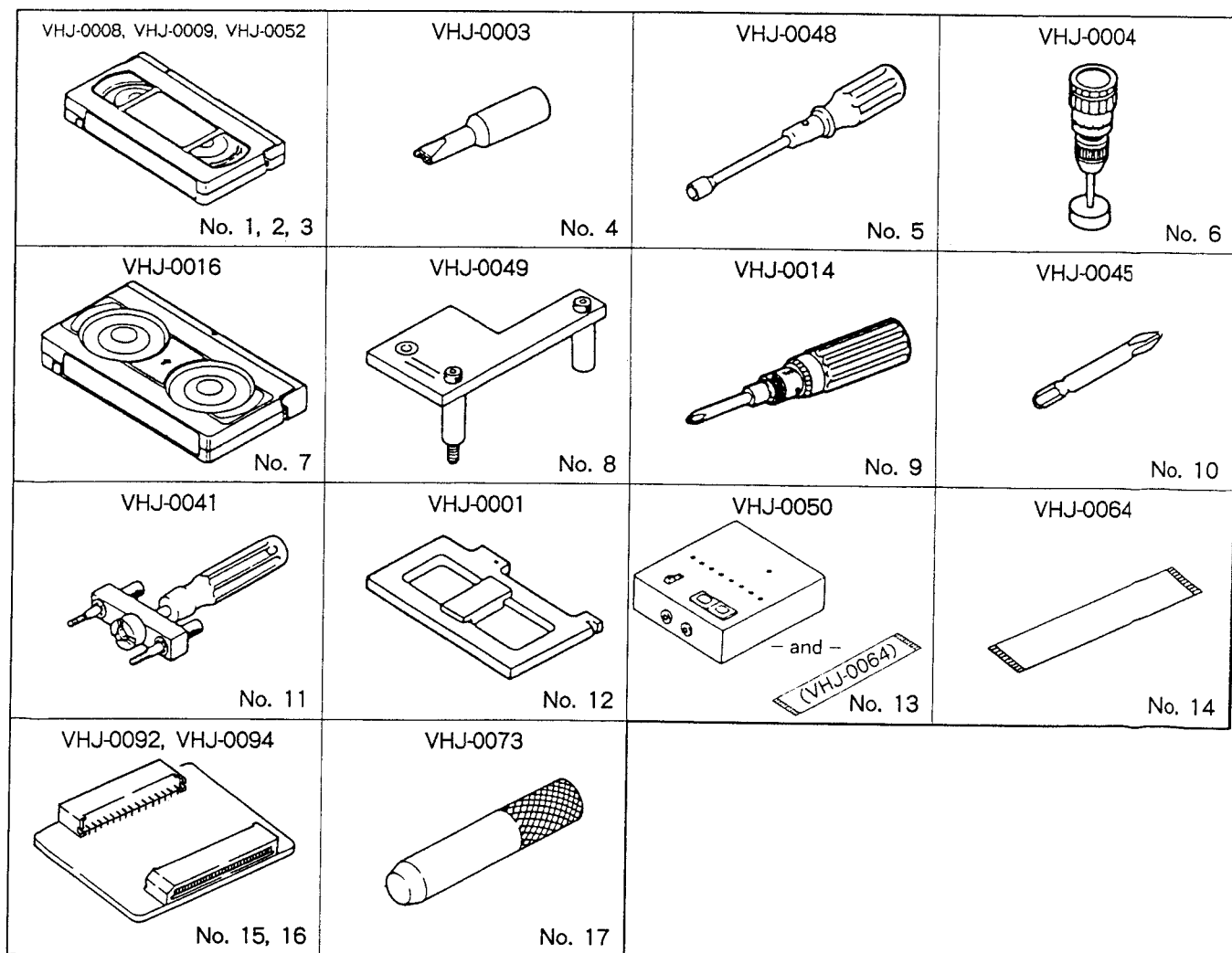


Fig. 2-5. Construction of Tape Loading Mechanism

[Page 30]

4-1-3. Service Jigs

No.	Jig	Jig No.	Remarks
1	Alignment tape	VHJ-0008	SP color bar, 1kHz (normal)
2	Alignment tape	VHJ-0009	SP monoscope, 7kHz (normal)
3	Alignment tape	VHJ-0052	LP monoscope, 3kHz (normal)
4	Eccentric screwdriver	VHJ-0003	For tape path adjustment
5	Nut box	VHJ-0048	For fixed guide removal
6	Torque gauge	VHJ-0004	For reel take-up torque measurement
7	Cassette torquemeter	VHJ-0016	For back tension torque measurement
8	Position adjustment gauge	VHJ-0049	For position adjustment
9	Torque gauge screwdriver	VHJ-0014	For screw fastening torque adjustment
10	3mm dia. bit for torque screwdriver	VHJ-0045	Spare bit for the torque gauge screwdriver
11	Video head removing tool	VHJ-0041	For upper drum removal
12	Cassette stand plate gauge	VHJ-0001	For reel height adjustment
13	Mode selector and 26-pin flexible flat cable (VHJ-0064)	VHJ-0050	For mechanism mode selection and for connecting mode selector
14	26-pin flexible flat cable	VHJ-0064	Spare cable for mode selector
15	Mode selector relay board	VHJ-0092	Relay board for mode selector (For HiFi model)
16	Mode selector relay board	VHJ-0094	Relay board for mode selector (For monaural model)
17	REV guide lever removing tool	VHJ-0073	REV guide lever removal



4-2-2. Connection Method (See Fig. 4-2-2)

The relay board in the HiFi model is different from that used in the monaural model. The gilt side of the MC-2 board of the HiFi model is marked "T-HiFi" while that of the monaural model is marked "T-MONO". Use the following exclusive relay board for each.

[For HiFi model]

NOKIA: VCR3764 HIFI N, 3764 HIFI VPS, 3784 HIFI N/SV, 3784 HIFI UK/VP, 3784 HIFI VPS/SV, 3784 HIFI IR/VP

LUXOR: VCR4764 HIFI N, 4784 HIFI N/SV

SALORA: VCR914 HIFI N, 924 HIFI N/SV, 924 HIFI SV

FINLUX: VR6550 HIFI UK/VP

- 1) Remove the 24-pin flat cable extending from the COMPL MC-2 board connector (CN811) from the connector of the system control circuit board, and connect it to the 24-pin connector of the mode selector relay board (VHJ-0092).
- 2) Connect the 26-pin flat cable (VHJ-0064) of the mode selector (VHJ-0050) provided between the mode selector body and the 26-pin connector of the mode selector relay board (VHJ-0092).

[For monaural model]

NOKIA: VCR3704, 3704EE, 3704VPS, 3724SV, 3724UK/VP, 3734IR/VP, 3744SV, 3744UK/VP, 3744VPS/V

LUXOR: VCR4704, 4744SV

SALORA: VCR624, 824SV

FINLUX: VR6350UK/VP

- 1) Remove the 29-pin flat cable extending from the COMPL MC-2 board connector (CN811) from the connector of the system control circuit board, and connect it to the 29-pin connector of the mode selector relay board (VHJ-0094).
- 2) Connect the 26-pin flat cable (VHJ-0064) of the mode selector (VHJ-0050) provided between the mode selector body and the 26-pin connector of the mode selector relay board (VHJ-0094).

Note: Care should be taken to avoid mistaking the direction of the contacting side when connecting the flexible flat cable.

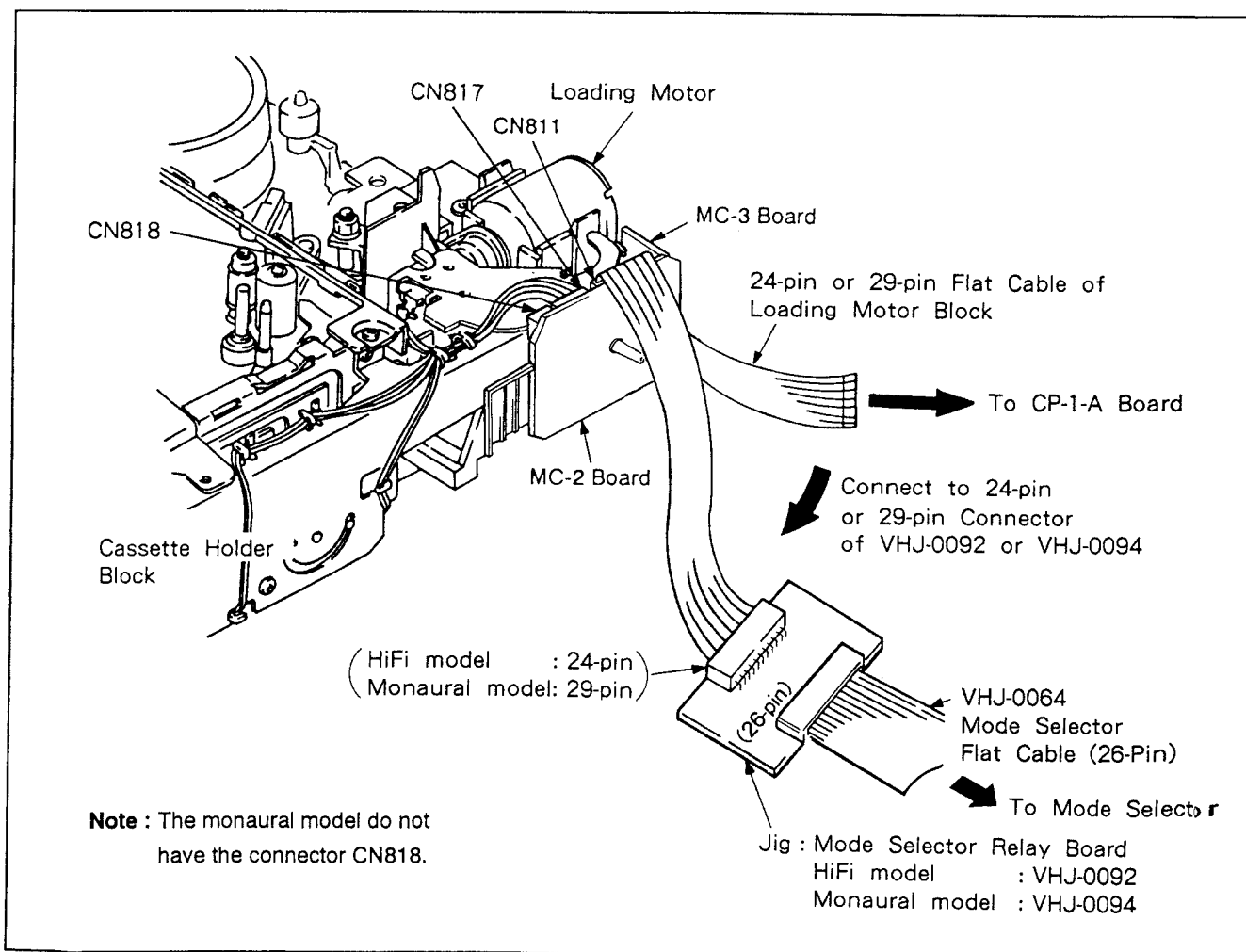


Fig. 4-2-2. Connection

5-2-2. Gear Bracket Ass'y (See Fig. 5-2-2.)

1. Removal

- 1) Remove the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
- 2) Remove the three screws ①, then remove the GEAR BRACKET ASS'Y ② as shown in Fig. A.
- 3) Remove the E ring ③, then remove the LOCK GEAR ④, the PINION LEVER ASS'Y ⑤, the PINION GEAR ⑥ and the RACK ⑦, in that order.

2. Remounting

- 1) Apply grease to the shaft ⑧ and the two pins ⑨ of the GEAR BRACKET ASS'Y.
- 2) Apply grease to the pin ⑩ of the PINION LEVER ASS'Y.
- 3) Apply grease to the toothed part of the RACK ⑦.
- 4) Fit the RACK ⑦ onto the two pins ⑨. Align the positioning alignment hole ⑪ to the positioning alignment hole ⑫ of the GEAR BRACKET.

- 5) Mount the PINION GEAR ⑥, PINION LEVER ASS'Y ⑤, and LOCK GEAR ④ in the shaft ⑧ in the order mentioned.

Align the positioning alignment holes ⑬ of PINION GEAR and LOCK GEAR with the positioning alignment hole ⑪ of RACK at that time.

- 6) Mount the E ring ③ onto the shaft ⑧.

- 7) Set the GEAR BRACKET ASS'Y ② to the dowel and mount it using three screws ①.

Align the positioning alignment hole ⑭ of the IDLER GEAR with the positioning alignment hole ⑮ of the SIDE BOARD as shown in Fig. 5-2-3 at this time.

Also align the positioning alignment holes ⑬ of PINION GEAR and LOCK GEAR with the positioning alignment hole ⑪ of GEAR BRACKET by referring to Fig. 5-2-2. After mounting them, check to be sure that FL START SWITCH ⑭ is in the ON state shown in Fig. A.

- 8) Remount the COMPL CASSETTE MECHANISM as instructed in 5-2-1.

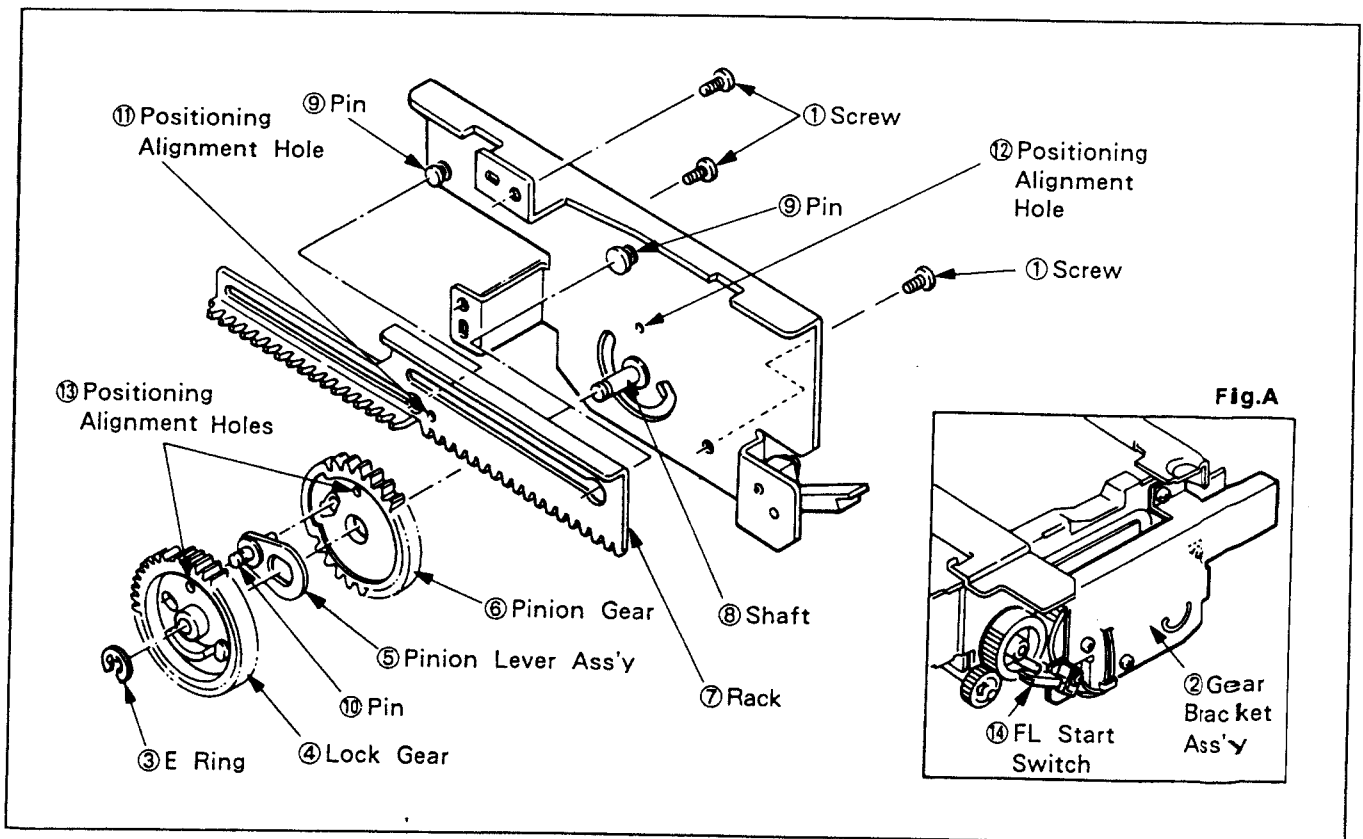


Fig. 5-2-2. Gear Bracket Ass'y

5-2-4. Cassette Drive Gear (left)
(See Fig. 5-2-4)

1. Removal

- 1) Remove the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
- 2) Remove the E ring ②.
- 3) Open the hook ③, then remove the LEVER GEAR ASS'Y L ④. Take care not to open the hook ③ too much, otherwise it may get deformed or broken. If it does, replace it.
- 4) Remove the SPRING COIL ⑤ from the LEVER GEAR ASS'Y L ④.

2. Remounting

- 1) Apply grease to the axle ⑨ and shaft ⑩.
- 2) Align with the COUPLE GEAR L ⑬ and the IDLER GEAR L ⑥ as shown in Fig. B.
- 3) Hook the SPRING COIL ⑤ to the LEVER GEAR ASS'Y L ④.
- 4) Mount the LEVER GEAR ASS'Y L ④ onto the axle ⑨ and the shaft ⑩. Align with the IDLER GEAR L ⑥ as shown in Fig. B.
- 5) Mount the COMPL CASSETTE MECHANISM onto the chassis as instructed in 5-2-1.

Note: The end of the DOOR OPEN LEVER ⑦ leans against the front side of the CASSETTE DOOR ⑪ as shown in Fig. A.

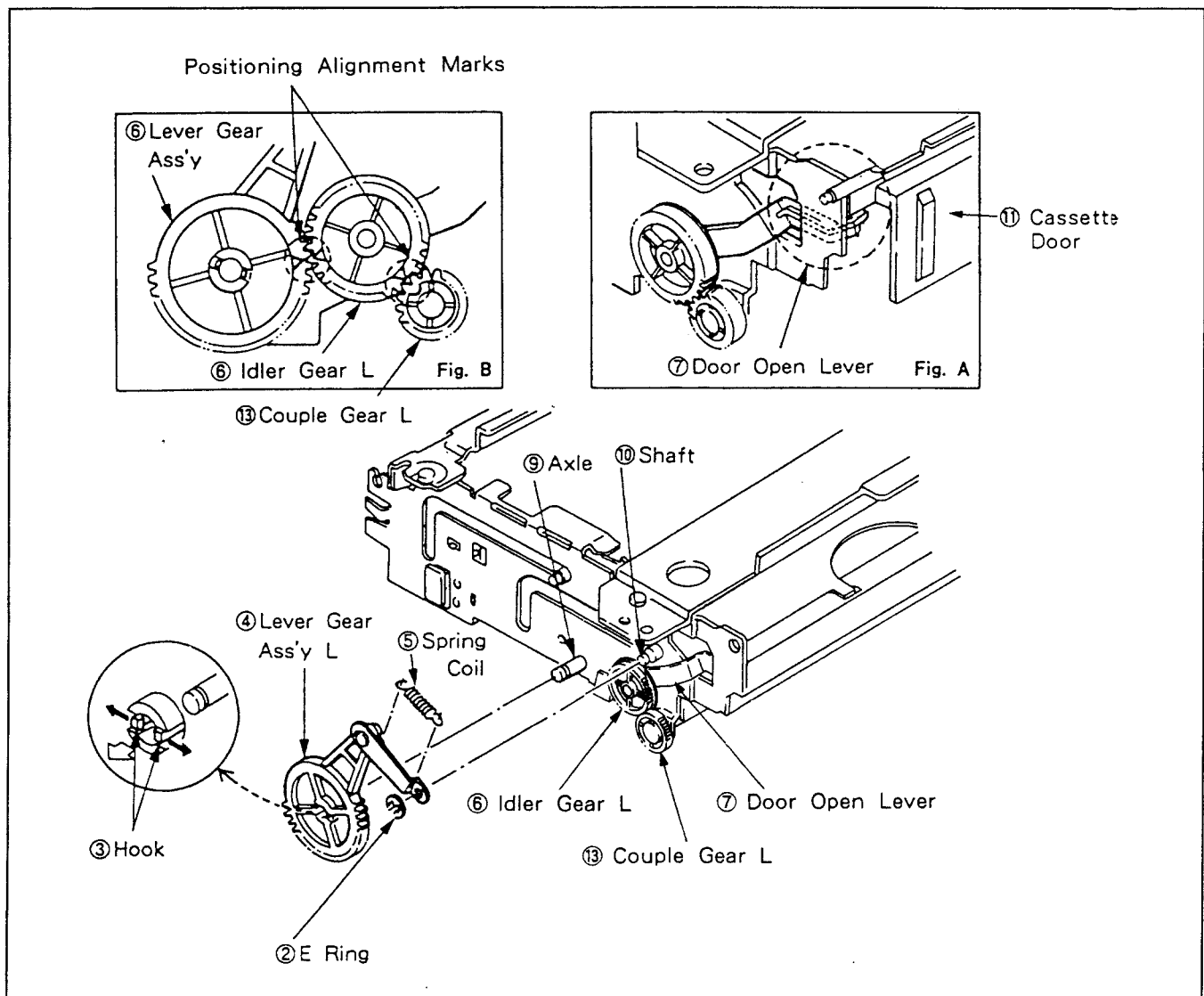


Fig. 5-2-4. Cassette Drive Gears (Left Side)

5-6. PINCH ROLLER PRESSURE MECHANISM (See Fig. 5-6-1.)

1. Removal

- 1) Remove the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
- 2) Remove the COMPL HEAD BRACKET as instructed in 5-5.
- 3) Remove the PINCH SPRING COIL ①.
- 4) Remove the special washer ②, then remove the PINCH LEVER ASS'Y ③.
- 5) Remove the REV GUIDE LEVER SPRING COIL ④.
- 6) Remove REV GUIDE LEVER ASS'Y ⑥ from the hook ⑤ of the plastic bearing on the bottom side. Use a jig VHJ-0073 shown in Fig. 5-6-2 to widen the hook of the plastic bearing. By so doing, the above removal of the REV GUIDE LEVER ASS'Y ⑥ can be made more easily. Care should be taken to avoid pushing the jig VHJ-0073 too much. Pushing it too hard may damage the hook in an extreme case.
- 7) Remove the SLIDE BRAKE SPRING COIL ⑦.
- 8) Remove the special washer ⑧, then remove the PINCH CAM LEVER ASS'Y ⑨.
- 9) Remove the ACT PINCH SLIDE ASS'Y ⑩.

Note: If the hook ⑤ of the plastic bearing is damaged, reference should be made to Section 3. "Method of Repairing the Bearing Section of REV GUIDE LEVER ASS'Y".

2. Remounting

- 1) Apply grease to pins ⑫/⑬ and axles ⑮/⑯.
- 2) Apply grease to the ACT PINCH SLIDE ASS'Y pin ⑮.
- 3) Set the INITIAL mode with the mode selector (VHJ-0050).
- 4) Mount the ACT PINCH SLIDE ASS'Y ⑩ onto pins ⑫ and ⑬.
- 5) Insert the pin ⑭ of the PINCH CAM LEVER ASS'Y ⑨ into the MAIN CAM ⑪ GROOVE 1, and mount onto the axle ⑮ while inserting the ACT PINCH SLIDE ASS'Y pin ⑮ of the ACT PINCH SLIDE ASS'Y into the hole ⑮.
- 6) Mount the special washer ⑧ onto the axle ⑮.
- 7) Hook the SLIDE BRAKE SPRING COIL ⑦ to the plastic pin ⑮.
- 8) Mount the REV GUIDE LEVER ASS'Y ⑥ to the plastic molding bearing, then fix it with the hook ⑤ at the bottom.
- 9) Hook the REV GUIDE LEVER SPRING COIL ④.
- 10) Mount the PINCH LEVER ASS'Y ③ to the axle ⑮.
- 11) Mount the special washer ② to the axle ⑮.
- 12) Hook the PINCH SPRING COIL ① between the ACT PINCH SLIDE ASS'Y ⑩ and the PINCH LEVER ASS'Y ③.
- 13) Mount the COMPL HEAD BRACKET as instructed in 5-5.
- 14) Mount the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
- 15) Perform ACE head adjustment as instructed in 6-4.

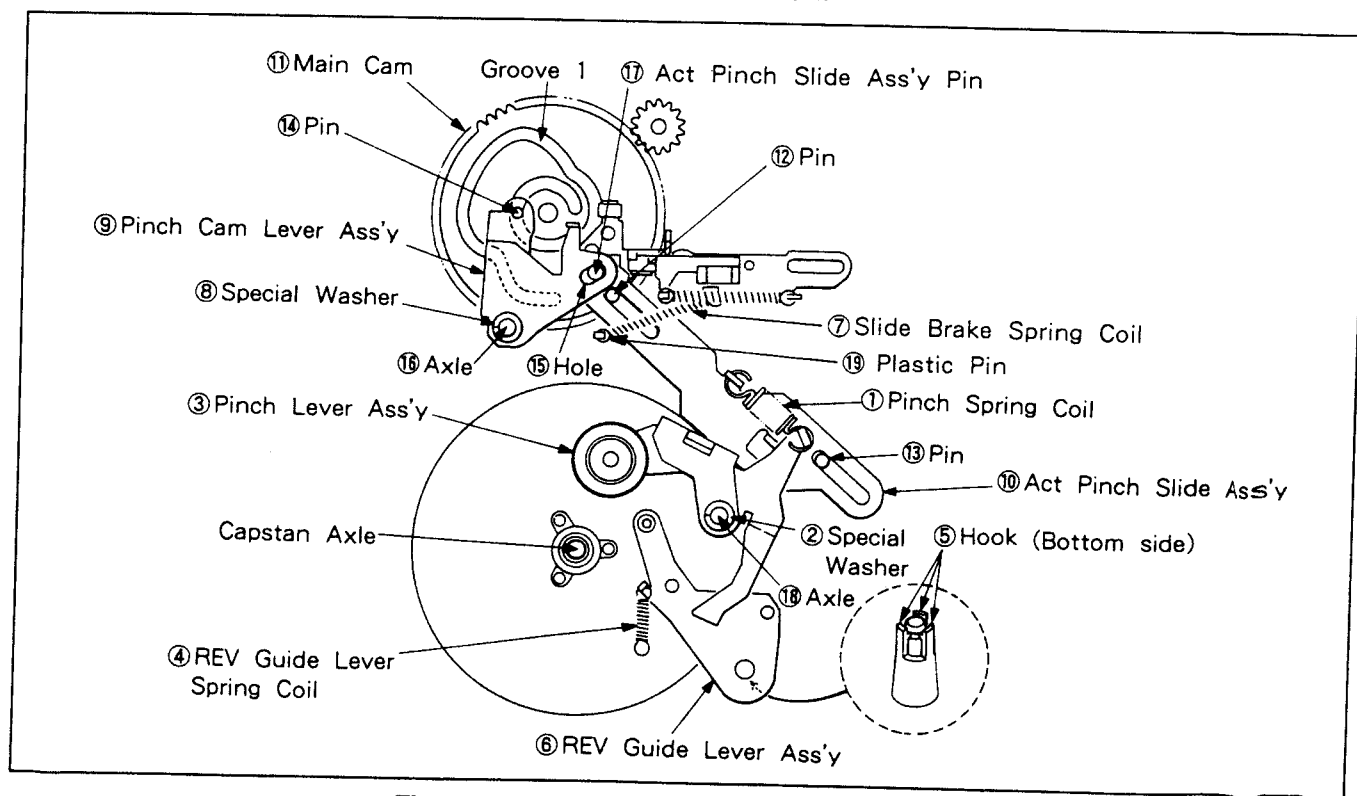


Fig. 5-6-1. Pinch Roller Pressure Mechanism

5-4. TAPE LOADING MECHANISM

5-4-1. Main Parts of the Tape Loading Mechanism (See Fig. 5-4-1.)

1. Removal

- 1) Remove connectors from the DRUM MOTOR board (SV-5).
- 2) Remove the three screws ①, then remove the REINFORCE BRACKET ②.
- 3) Remove the three special washers ③ and ⑦, then remove the spacer ⑥, LOAD RACK ④ and MAIN CAM ⑧.
- 4) Unhook the LOAD GEAR T hook ⑩, then remove the LOAD GEAR T ⑨ as shown in Fig. A, with the SPRING COIL ⑪ and the LOAD LEVER ASS'Y T ⑫ attached to it.
- 5) Unhook the LOAD GEAR S hook ⑭, then remove the LOAD GEAR S ⑬ as shown in Fig. B, with the SPRING COIL ⑮ and the LOAD LEVER ASS'Y S ⑯ attached to it.

Note: Take care not to open the LOAD GEAR hooks too much, otherwise they may be deformed or broken. If they are, replace them.

2. Remounting

- 1) Apply grease to the hole ⑰ of the LOAD LEVER ASS'Y S ⑯, as shown in Fig. B.
- 2) Apply grease to the hole ⑳ of the LOAD LEVER ASS'Y T ⑫ as shown in Fig. A, and to the sections of the LOAD GEAR T ⑨ as indicated with an arrow in Fig. C.
- 3) Apply grease to GROOVE 1, GROOVE 2 and to the outer side of the MAIN CAM ⑧, shown in Fig. E.
- 4) Apply grease to the three oval holes of the LOAD RACK ④ as shown in Fig. D.
- 5) Apply grease to the outer surface of axles ⑲, ⑳ and ㉑.
- 6) After assembling as shown in Fig. B, mount the LOAD GEAR S ⑬ onto the axle ⑲. Insert the ROLLER BASE S pin ⑱ into the hole ⑰ of the LOAD LEVER ASS'Y S.
- 7) After assembling as shown in Fig. A, mount the LOAD GEAR T ⑨ onto the axle ㉑. When doing so, align the INITIAL mode positioning alignment holes ㉒ of the LOAD GEAR S ⑬ and the LOAD GEAR T ⑨ to the INITIAL mode position. Insert the ROLLER BASE T pin ㉓ into the hole ㉔ of the LOAD LEVER ASS'Y T ⑫.
- 8) Mount the MAIN CAM ⑧ onto the axle ㉕. At that time, make sure that the INITIAL mode positioning alignment holes ㉖ of the MAIN CAM ⑧ and the MODE CAM ㉗ match the INITIAL mode positioning alignment holes ㉘ of the MECHANISM CHASSIS. Also check to be sure that the pin ㉙ of the CAM PINCH LEVER ASS'Y is put in the GROOVE 1 of the MAIN CAM as shown in Fig. E.
- 9) Mount the LOAD RACK ④ onto the axles ㉕ and ㉖. At that time, set the INITIAL mode positioning alignment marks ㉚ of the LOAD RACK ④ and the LOAD GEAR T ⑨ to the INITIAL mode position. Insert the LOAD RACK pin ㉛ into the MAIN CAM GROOVE 2 as shown in Fig. E.
- 10) Mount the spacer ⑥ and the special washer ⑦ onto the axle ㉕.
- 11) Mount the two special washers ③ onto the two axles ㉖.
- 12) Mount the REINFORCE BRACKET ② with the three screws ①.
- 13) Insert the connector into the DRUM MOTOR board (SV-5).
- 14) Confirm that loading and unloading are performed smoothly.

Note: Be sure to perform INITIAL mode positioning of cams and gears precisely.

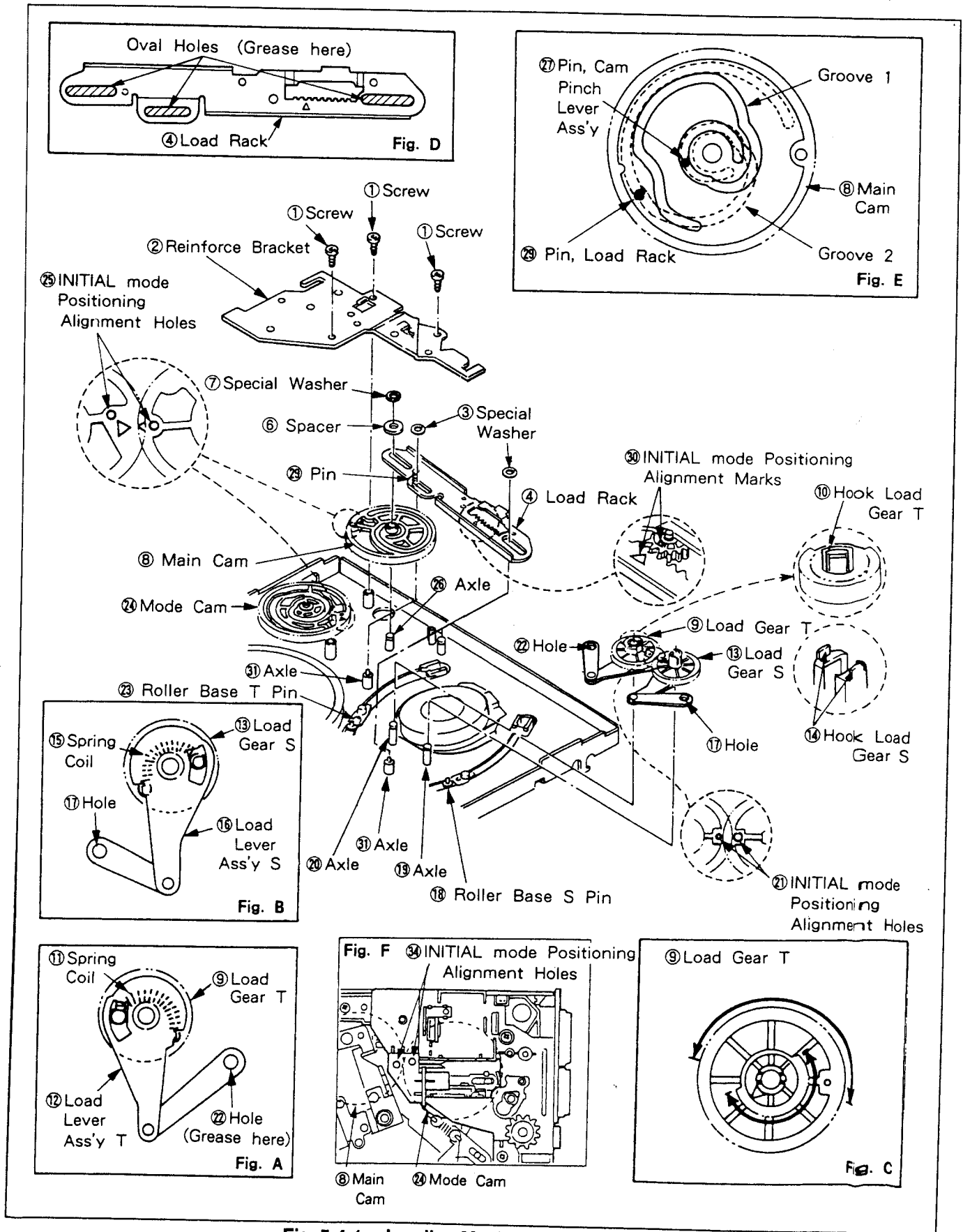


Fig. 5-4-1. Loading Mechanism Main Parts

5-8-4. Reel Pulley and Friction Gear Ass'y (See Fig. 5-8-4.)

1. Removal

- 1) Remove the REEL DRIVE BELT ③.
- 2) Remove the special washer ④, then remove the REEL PULLEY ⑤.
- 3) Remove the special washer ⑥, then remove the FRICTION GEAR ASS'Y ⑦ and the washer ⑧.

2. Remounting

- 1) Apply one drop of oil to the parts of axles ⑨ and ⑩ indicated with arrows.
- 2) Mount the washer ⑧ and the FRICTION GEAR ASS'Y ⑦ onto the axle ⑨.
- 3) Mount the special washer ⑥ onto the axle ⑨.
- 4) Mount the REEL PULLEY ⑤ onto the axle ⑩.
- 5) Mount the special washer ④ onto the axle ⑩.
- 6) Set the REEL DRIVE BELT ③.

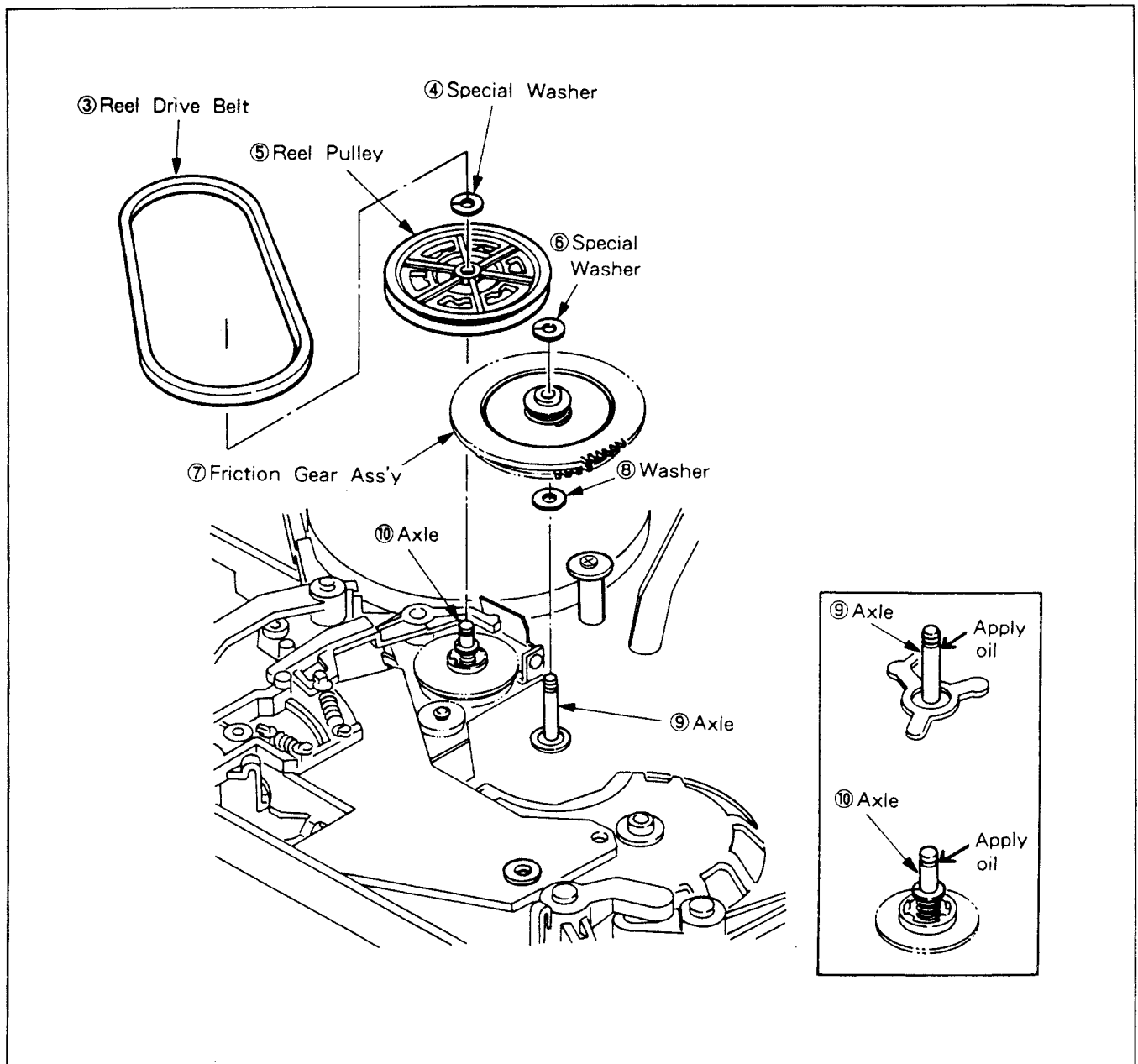


Fig. 5-8-4. Reel Pulley & Friction Gear

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5-8-5. COMPL Clutch (See Fig. 5-8-5.)

1. Removal

- 1) Remove the COMPL CASSETTE MECHANISM as instructed in 5-2-1.
- 2) Remove the REEL DRIVE BELT and the REEL PULLEY as instructed in 5-8-4.
- 3) Remove the screw ①, then remove the COMPL MC-4 ②.
- 4) Remove the two screws ③, then remove the COMPL CLUTCH ④.

2. Remounting

- 1) Mount the COMPL CLUTCH ④ with the two screws ③, aligning it with the protuberance ⑤.
- 2) After inserting the CN831 (COMPL MC-4) into the CN801 (COMPL MC-1), mount the COMPL MC-4 with the screw ①.
- 3) Mount the REEL PULLEY and REEL DRIVE BELT as instructed in 5-8-4.
- 4) Mount the COMPL CASSETTE MECHANISM as instructed in 5-2-1.

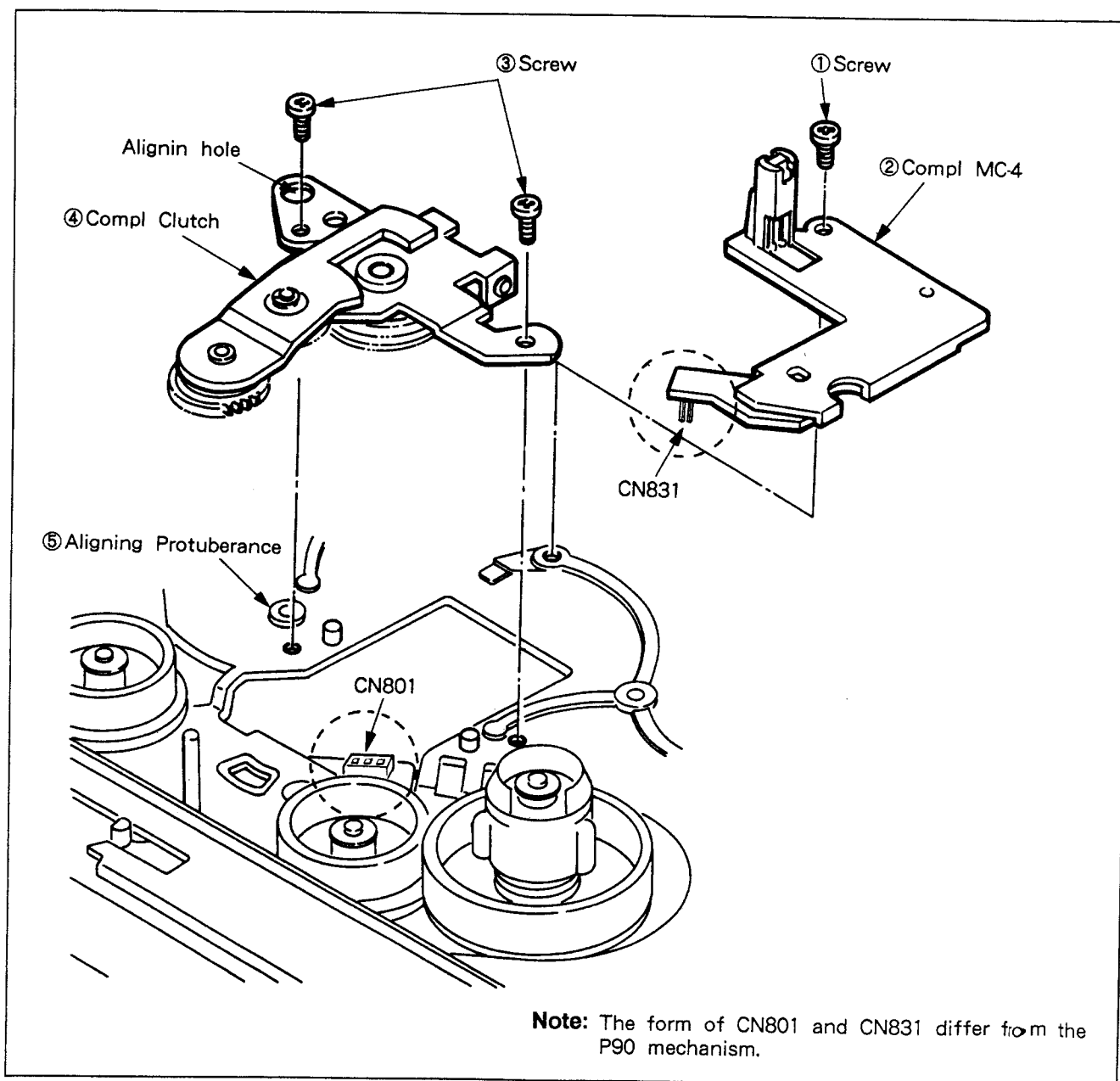


Fig. 5-8-5. Compl Clutch

5-10. FIXED GUIDE, FE HEAD LEVER ASS'Y

5-10-1. S-Side Fixed Guide and FE Lever Ass'y (See Fig. 5-10-1.)

1. Removal

- 1) Remove the special nut ①, then remove the GUIDE PIPE ③ and the special washer ② (lower), in that order.
- 2) Remove the SPRING COIL ⑤.
- 3) Remove the FTE HEAD connector, then remove the FE HEAD LEVER ASS'Y ⑦.

2. Remounting

- 1) Mount the FE LEVER ASS'Y ⑦ onto the axle ⑧.
- 2) Hook the SPRING COIL ⑤ between the chassis notch ⑨ and the FE LEVER ASS'Y hook ⑩.
- 3) Mount the special washer ② (lower), the GUIDE pipe ③ and the special nut ① to the axle ⑧, in that order. At that time, do not excessively tighten the special nut ① to avoid idle rotation of the axle rivet. The height of fixing guide on the inlet side is not required.
- 4) Connect the connector to the FTE HEAD.

Note: Some models do not have the impedance roller.

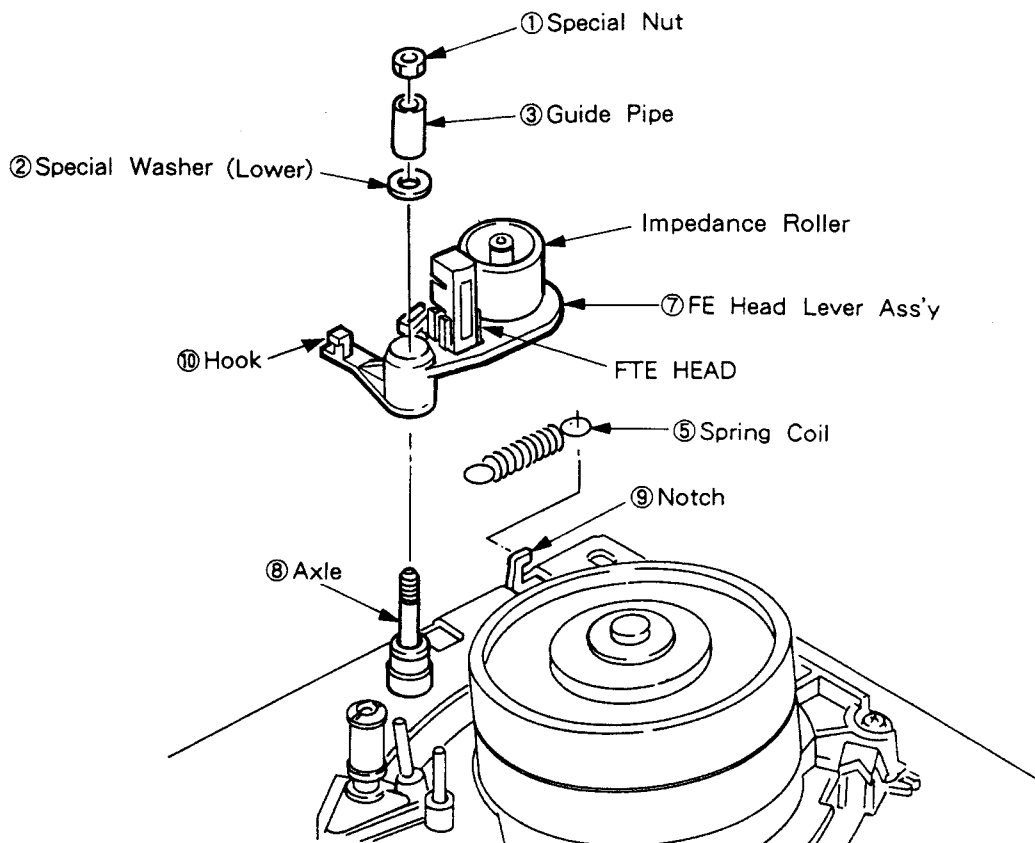


Fig. 5-10-1. Fixed Guide (S) & FE Lever Ass'y

5-10-3. Exit side Fixed Guide (See Fig. 5-10-3.)

1. Removal

- 1) Remove the CAP ①.
- 2) Remove the special NUT ②, then remove the special washer ③ (upper), the GUIDE PIPE ④, the special washer ③ (lower) and the sleeve ⑤, in that order.

2. Remounting

- 1) Mount the sleeve ⑤, the special washer ③ (lower), the GUIDE PIPE ④, the special washer ③ (upper) and the special NUT ②, in that order, to the axle ⑥.

- 2) Mount the CAP ① onto the axle ⑥.

Note: There is no need of height adjustment of the exit side fixed guide.

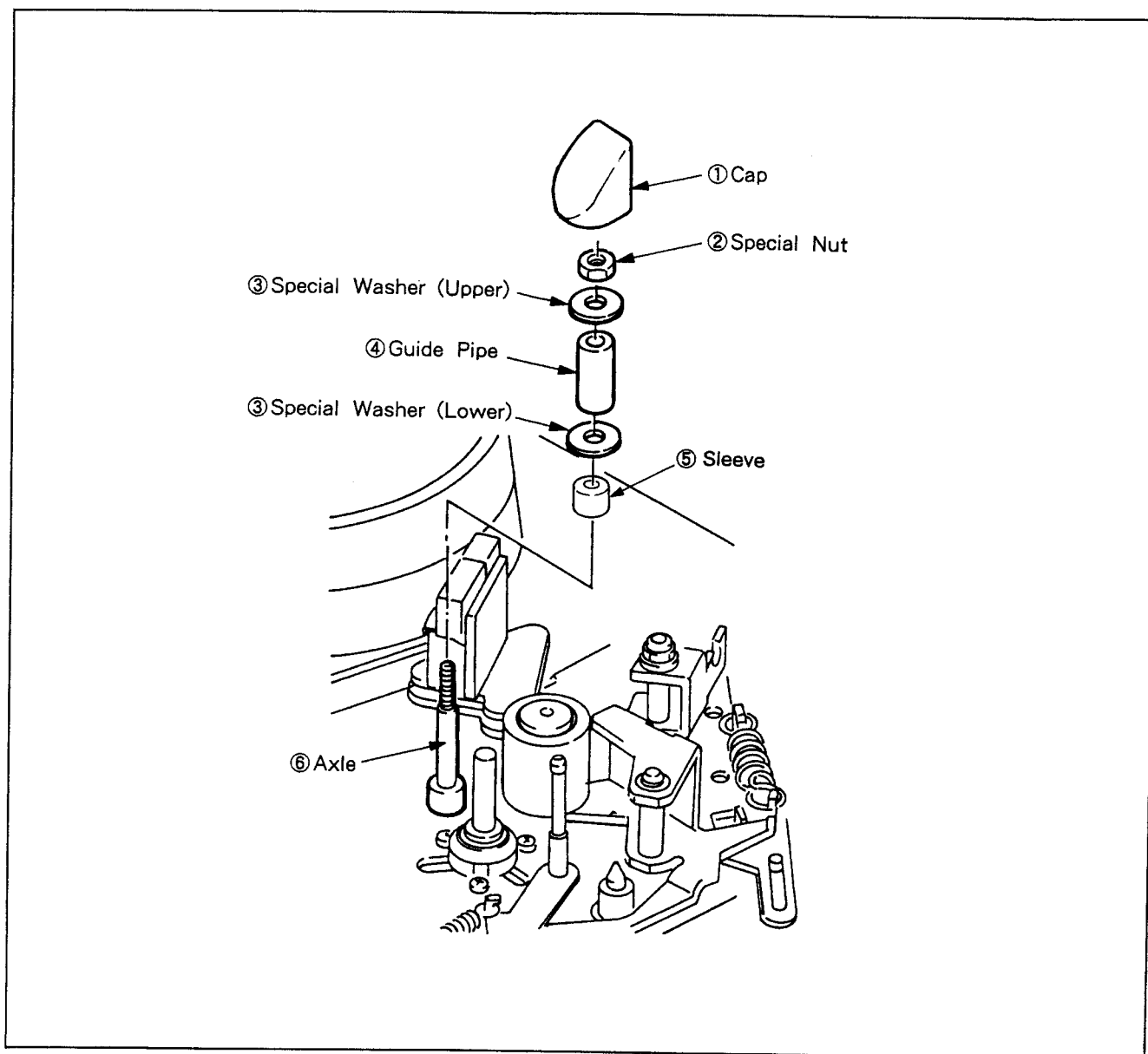


Fig. 5-10-3. Fixed Guide (T)

5-11. DRUM SECTION

5-11-1. Drum Motor(rotor, stator)(See Fig. 5-11-1.)

1. Removal

- 1) Referring to 5-4-1 in this SUPPLEMENT, remove the special washer and the LOAD RACK.
- 2) Remove the screw ①, then remove the CYLINDER EARTH ASS'Y ②.
- 3) Remove the two screws ③, then remove the ROTOR ④ and SPACER.
- 4) Remove the STATOR board connector ⑩.
- 5) Remove the three screws ⑤, then remove the STATOR ⑥.

2. Remounting

- 1) Mount the STATOR ⑥ with the three screws ⑤.
- 2) Mount the SPACER ⑪ on to the AXLE ⑫.
- 3) While aligning the ROTOR oval hole ⑦ with the ROTOR DISK hole ⑧, mount the ROTOR with the two screws ③.

- 4) Insert the connector ⑩.

- 5) While aligning the CYLINDER EARTH ASS'Y ② protuberance with the chassis hole ⑨, mount it with the screw ①.

- 6) Referring to 5-4-1 in this SUPPLEMENT, attach the LOAD RACK and the special washer. It is needed that the LOAD RACK is to be set correctly to the LOAD GEAR T.

Note 1: Use a torque driver (VHJ-0014) for mounting the STATOR ⑥ and the ROTOR ④. Set fastening torque to 3kg-cm.

Note 2: When the drum unit has been replaced, perform a tape path adjustment as instructed in 6-4. and perform a CH-1/CH-2 switching position adjustment of the servo circuit.

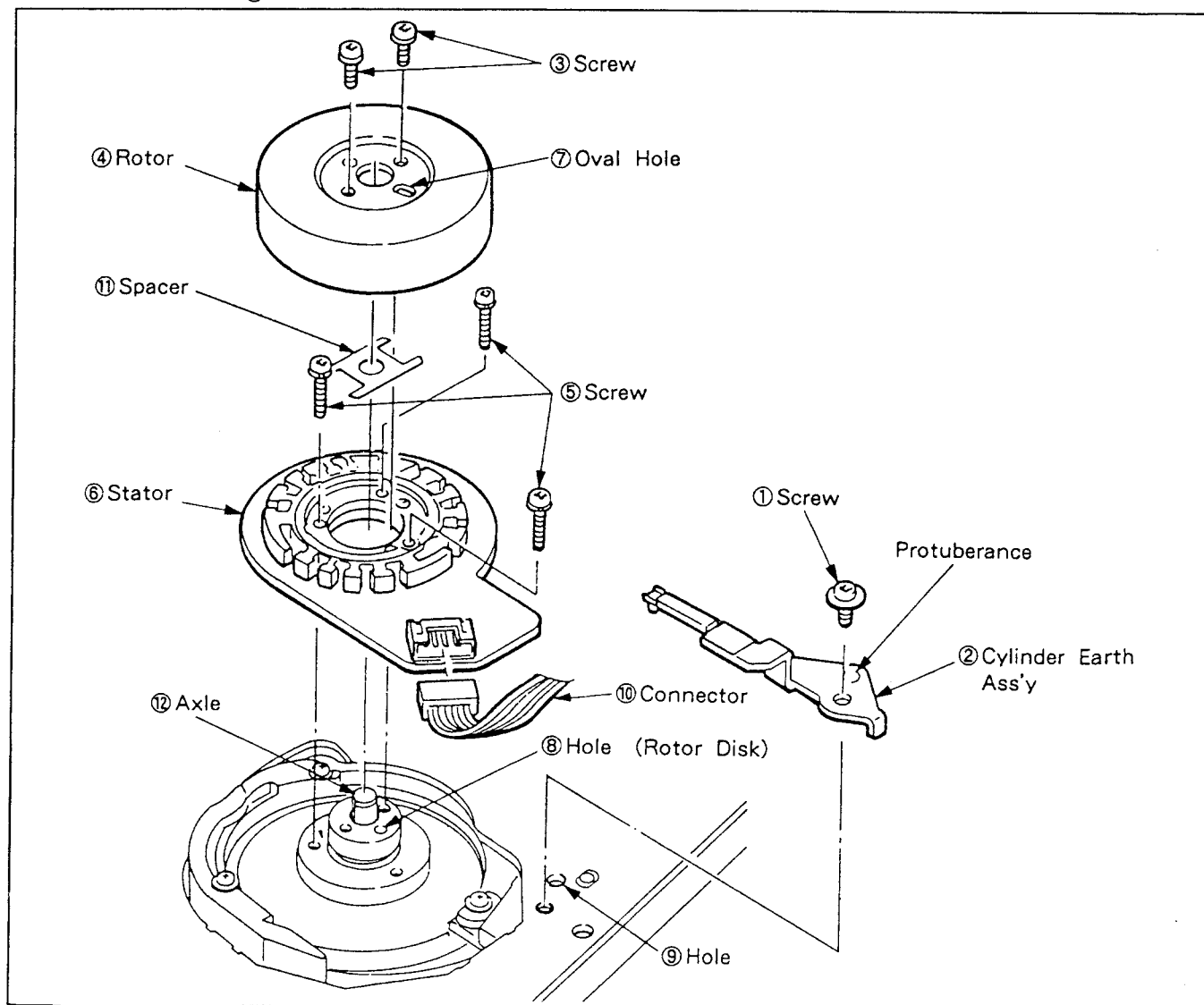


Fig. 5-11-1. Drum Motor

5-13. AUTO HEAD CLEANER MECHANISM (See. Fig. 5-13-1 • Fig. 5-13-2 • Fig. 5-13-3)

1. Removal

Note: • Do not hold the ROLLER CLEANER ASS'Y ① by bare hand. Use tweezers and gloves not soiled with grease or dust, etc.

- When the cleaning function deteriorates and replacing only ROLLER CLEANER ASS'Y ①, there is no need to perform item 4).

- 1) Make sure that the ROLLER CLEANER ASS'Y ① is not pressed against a drum (cylinder).
- 2) Remove the PRE-AMP UNIT and the PRE-AMP BRACKET.
- 3) Remove screw ②, then lift up and remove the BRACKET CLEANER ASS'Y ③.
- 4) With the BRACKET CLEANER ASS'Y ③ is fixed by finger, turn the LEVER CLEANER ASS'Y ④ 35° to 40° to clockwise, then lift up and remove.
- 5) Remove the stop washer ⑤, then remove the ROLLER CLEANER ASS'Y ①.

2. Remounting

- 1) Mount the ROLLER CLEANER ASS'Y ① and the stop washer ⑤ to the axle ⑥ of LEVER CLEANER ASS'Y.
Mount the ROLLER CLEANER ASS'Y ① so that the mark shown in Fig. 5-13-2 is up side. If the mark is down side, noise may occur.
- 2) Mount the SPRING COIL ⑧ and the LEVER CLEANER ASS'Y ④ to the axle ⑦ of BRACKET CLEANER ASS'Y. At this time, hook the SPRING COIL ⑧ to the hole ⑨ of the LEVER CLEANER ASS'Y and the bent part ⑩ of the BRACKET CLEANER ASS'Y. "A part" of the LEVER CLEANER ASS'Y should be under "B part" of the BRACKET CLEANER ASS'Y.
- 3) Fix the BRACKET CLEANER ASS'Y ③ on screw hole ⑫ by screw ②. Before fasten screw ②, insert hole ⑪ of the BRACKET CLEANER ASS'Y to axle ⑬, axle ⑦ to hole ⑬ to match positions. Pin ⑭ of the LEVER CLEANER ASS'Y should be run along the circumference of the MAIN CAM ⑮ not to be came off.
- 4) The upper side of the lower drum should be within approx. 2mm from the lower side of the ROLLER CLEANER ASS'Y as shown in Fig. 5-13-3.
- 5) Mount the PRE-AMP BRACKET and the PRE-AMP UNIT.

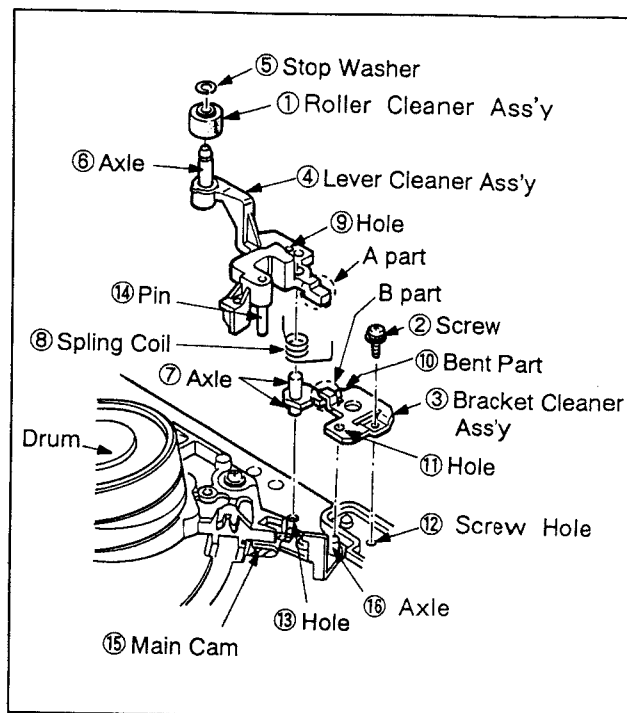


Fig. 5-13-1

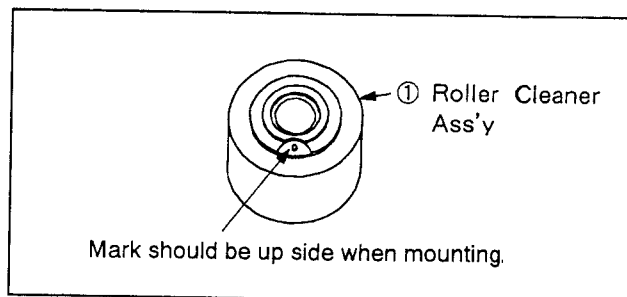


Fig. 5-13-2

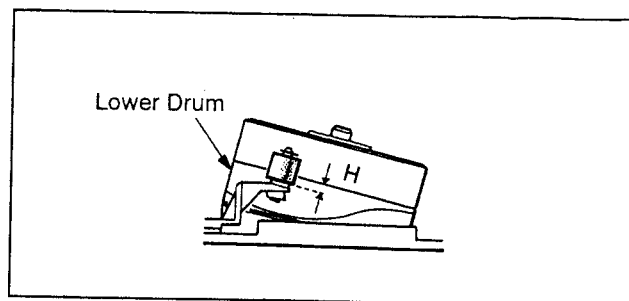


Fig. 5-13-3

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.